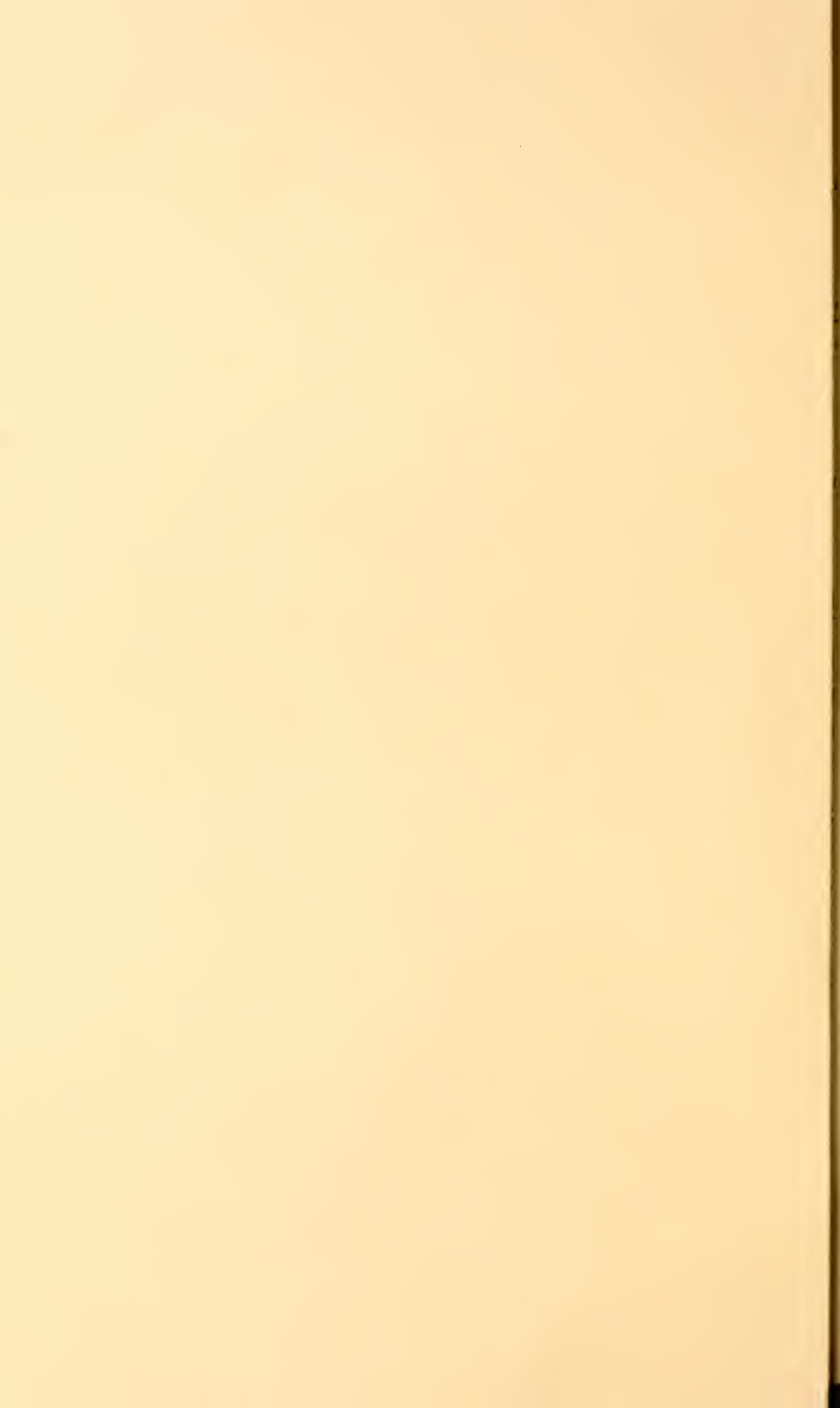


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UNITED STATES DEPARTMENT OF AGRICULTURE

MISCELLANEOUS PUBLICATION No. 62

WASHINGTON, D. C.

NOVEMBER, 1929

BIBLIOGRAPHY ON THE RELATION OF CLOTHING TO HEALTH

By

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and

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FOREWORD

This bibliography includes references to English, French, and German books and articles relating to the hygienic aspects of clothing. Since strictly scientific material on this subject is very meager, articles popular in nature have been included. The judgment of their relative value has been left to the user. A few publications issued prior to 1875 and after 1927 are given, but only the literature printed during the intervening years has been carefully searched.

The references are arranged by subjects, which in turn are classified chronologically according to authors. Citations are made in accordance with the procedure used in the *Journal of Agricultural Research*. Abbreviations of titles of periodicals are those employed in the *Experiment Station Record* and are listed in *United States Department of Agriculture Department Bulletin 1330*.

This bibliography is the result of an amplification of a list of references compiled by M. A. Davis and E. T. Shively, formerly of this bureau. Acknowledgement is also made to C. F. Langworthy for translations of many of the German articles.

GENERAL

- (1) ANONYMOUS.
1854-55. DE L'EMPLOI DES VÊTEMENTS. [The use of clothing.] *Santé, Jour. Hyg. Pub. et Privée* [Brussels] 5: [253]-256, 268-270. 1854. 6: 37-39, 205-208, [217]-220, 234-236, 244-246, 269-271, 279-281. 1854-55.
Series of articles in which the hygienic and economic aspects of such garments as corsets, gloves, overcoats, and foot coverings are considered.
- (2) ———.
1870. A VENTILATING RIDING COAT. *Lancet* [London] 1870 (v. 2): 660.
Brief description of a waterproof coat with two loose flaps overlapping on the back and a similar arrangement under the arms to promote ventilation.
- (3) ———.
1875-76. THE HYGIENE OF DRESS. *Sanit. Rec.* 3: 358-359, 399-401, 414-415, 446-448. 1875. 4: 54-55. 1876.
Series of articles, chiefly of historical interest, that summarize the ideas prevailing at that time on the hygienic aspects of clothing. Principles of clothing are discussed, together with under and outer garments, the clothing of women and children, and overcoats. A few references to previous publications are included.
- (4) ———.
1881. ZUR ABWEHR DER WECHSSLER'SCHEN ANGRIFFE AUF DIE WOLLEKLEIDUNGESP. *Jäger'sche Normalkleidung*. [Protest against Wechsler's attacks upon Jaeger's normal clothing.] *Naturärzt* 20: 66-68, 82-86.
A controversial article in which the author favors Jaeger clothing.
- (5) ———.
1883. DRESS REFORM ONCE MORE. *Sat. Rev.* [London] 55: 592-593. [Reprinted in *Eclectic Mag.* (n. s. 38) 101: 205-208.]
Report of an address on dress reform. The speaker advocated trousers for women and soft collars for men. Of historical interest in connection with the dress-reform movement.
- (6) ———.
1895. WINTER CLOTHING. *Chamber's Jour.* (5) 12: 55-57.
General advice is given concerning underwear, footwear, outer wear, hand coverings, and night wear. The maxim "warm but light" is stressed in connection with all such garments.
- (7) ———.
1896. ASBESTOS-LINED BOOTS. *Brit. Med. Jour.* 1896 (v. 1): 103-104.
Description of a patented shoe with an asbestos middle sole. The writer believes this feature advantageous and desires further investigation of such shoes.
- (8) ———.
1914. AN IMPROVED UNDERSHIRT. *Textile World Rec.* 43 (1): 145-146, illus.
Proposes a garment devised to close without buttons for infants and invalids.
- (9) ———.
1915. DISAPPEARANCE OF THE NORMAL FOOT AMONG THE CIVILIZED. *Current Opinion* 59: 178-179, illus.
The author considers that all foot maladies can be traced to the modern shoe. He supports this view by comparing the normal foot of the savage and the deformed foot of civilized man.
- (10) ———.
1916. THE CARE OF THE FEET. THE INJURIES RESULTING FROM IMPROPER SHOES. *Sci. Amer. Sup.* 81: 252-253, illus.
This article from *Die Umschau* points out the evils of the high heel and the "fashionable" shoe.

(11) ANONYMOUS.

1926. PRIZE HOT WEATHER HINTS. Lit. Digest 90 (5) : 21.

Discusses reports on how to keep cool in hot weather. Suggests hot showers in the hottest part of the day, proper food, and linen and cotton clothing light in color, loose in weave, and loose fitting.

(12) ———.

1927. THE MODERN KNIGHT IN ARMOR. Natl. Safety News [Chicago] 16 (3) : 19-20, illus.

A general article discussing protective and safe clothing to be worn in industrial plants. The essentials for such clothing are that it be reasonably comfortable in any temperature, that it fit as well as street clothing, and that it be durable and afford adequate protection against the hazards for which it was designed. Loose clothing of any kind is to be avoided where there is moving machinery. Each hazardous occupation has its own specific safety garments, several of which are illustrated and described.

(13) ———.

1928. ARCTIC INFLUENCE ON SPORTSWEAR. Textile World 74: 1204, illus.

Mentions the selection of 40-ounce camel's-hair cloth for parkas and hooded greatcoats by both the Byrd and the Wilkins South Pole expeditions. The fabric and garments are described. Camel's-hair cloth is also being used for coats by certain air transport companies who plan to supply such garments to their passengers.

(14) ———.

1928. SEVEN MILES UP AND 76 DEGREES BELOW ZERO. Chemicals 30 (25) : 22-24, illus.

The clothing worn during an altitude flight is described. Each aviator first covered his body with grease, and then put on a bathing suit, three suits of woolen underwear, a woolen uniform, and finally a leather flying suit with a fur collar. They also wore three pairs of wool socks, wool-lined gloves equipped with electric heating coils, and a wool-lined leather helmet covering the entire head.

(15) ADAMS, Z. B.

1925. SHOEING. Med. Press and Circ. (n. s.) 119: 257-258; Med. Jour. and Recorder 121: 85-86.

Maintains that improperly fitted shoes cause more foot troubles than poorly made ones and that a foot does not need a support but a surface on which it may rest.

(16) ALLEN, I. O.

1911. ILL-FITTING AND POORLY-CONSTRUCTED SHOES,—A CAUSE OF PHYSICAL AND MENTAL DETERIORATION. Dietet. and Hyg. Gaz. 27: 265-269.

The author thinks ill-fitting shoes effect not only the wearer's physical well-being, but also his mental state. He describes a well-fitting shoe and illustrates how it is conducive to health.

(17) ALSOP, G. F.

1925. BEAUTIFUL FEET. Woman Citizen (n. s.) 9 (19) : 28-29.

A plea for sensible shoes with descriptions of malformations of the feet caused by incorrect shoes.

(18) ASHLEY, D. D.

1916. SHOES, PHYSIOLOGICAL AND THERAPEUTIC. N. Y. Med. Jour. 103: [337]-342, illus.

The author contends that weak feet are the result of civilization combined with unphysiological shoes. He emphasizes that the weak points of the feet should be recognized and guarded. Proper shoes are described and exercises given for defective feet.

(19) ASHLEY, D. D.—Continued.

1918. SHOES, PHYSIOLOGICAL AND THERAPEUTIC. N. Y. Med. Jour. 107: [433]—437, 498—502, illus.

An article dealing particularly with men's shoes. The author considers that the shoe of both the orthopedic and the usual last are physiologically correct only when they are well fitted.

(20) AUGUSTE, N.

1874. ÉTUDE HYGIÉNIQUE SUR L'USAGE DE LA FLANNELLE EN CONTACT DIRECT AVEC LA PEAU. [Hygienic study on the use of flannel in direct contact with the skin.] 55 p. Paris. (Thesis No. 389.)

Gives the history of the use of flannel and its physical and physiological properties. Discusses the use and value of flannel for people in all walks of life and professions, in both warm and cold climates.

(21) BACON, M. M.

1921. THE ANATOMY OF FEET AND THEIR FULL EFFICIENCY. . . . Nation's Health 3: 283—285, illus.

Describes the foot characteristics of the different races. Discusses the great prevalency of foot deformity and the harmful effects caused by improperly fitting shoes.

(22) BALCH, E. S.

1904. SAVAGE AND CIVILIZED DRESS. Jour. Franklin Inst. 157: [321]—332.

Examples are cited to show that the methods of covering the body used by savages are usually adapted to the climate in which they live. The disadvantages of civilized dress are pointed out with special emphasis on the lack of ventilation afforded by clothing and the evils of corsets and improperly fitting shoes. Seventeen references to writings of explorers which contain scattered notes on the clothing of savage tribes are included.

(23) BALLIN, A. S.

1885. THE SCIENCE OF DRESS IN THEORY AND PRACTICE. 273 p., illus. London, Sampson Low, Marston, Searle & Rivington.

Considers such subjects as heat regulation; clothing for infants, children, and adults, with special chapters on clothing for women and girls and on footwear. The color of clothing materials and poisoning by dyestuffs are also discussed.

(24) BANCROFT, J. H.

1913. THE POSTURE OF SCHOOL CHILDREN WITH ITS HOME HYGIENE AND NEW EFFICIENCY METHODS FOR SCHOOL TRAINING. 327 p., illus. New York, The Macmillan Co.

The most common faults of corsets, shoes, and boys' clothes are considered on p. 167—177.

(25) BANNING, E. P.

1846. COMMON SENSE OF CHRONIC DISEASES; OR, A RATIONAL TREATISE ON THE MECHANICAL CAUSE AND CURE OF MOST CHRONIC AFFECTIONS OF THE TRUNCAL ORGANS OF BOTH MALE AND FEMALE SYSTEMS. EMBRACING THE AUTHOR'S VIEWS ON PHYSICAL EDUCATION, AND THE PRESENT POPULAR SYSTEM OF ARTIFICIAL LIFE. Ed. 6, 199 p., illus. New York, Paine & Burgess.

The effect of mechanical compression on the health of both men and women is considered. Of historical interest.

(26) BARKER, C. F.

1902. SOME CLINICAL, THERAPEUTICAL, SANITARY AND UTOPIAN IDEAS ABOUT CLOTHES. Clinique [Chicago] 23: 422—433.

Paper read before American Institute of Homeopathy stressing the healthfulness of nudity, the desirability of eliminating and simplifying clothing, and the unhygienic characteristics of much of the clothing worn.

- (27) BARNETT, E. A.

[n. d.] COMMON-SENSE CLOTHING. 150 p., illus. London.

General discussion of the hygienic aspects of clothing. The properties of various textile fibers and the injurious effects resulting from tight and improperly fitting garments are included, with special attention to corsets, shoes, and hats. One section is devoted to cleanliness and disinfection of clothing and another to children's clothing and its effect upon the health of the child.

- (28) BARTHÉLEMY.

1921. LA CHAUSSURE DU MARCHEUR OU CHAUSSURE "ANATOMOPHYSIOLOGIQUE." [The footwear of the pedestrian or "anatomophysiological" footwear.] Paris Méd. 40: 325-333, illus.

The author maintains that good shoes should respond to the feet and have well-proportioned heels and well-cut flexible soles that permit free movement of the metatarsal bones.

- (29) BAUMGARTEN, A.

1903. REFORM UND MODE DER WEIBLICHEN UND MÄNNLICHEN (ZIVIL-UND MILITÄR-) KLEIDUNG. [Reform and style of feminine and masculine (civil and military) clothing.] Zentbl. Kneippsche Heilverfahren 10: [241]-245, [253]-257, [265]-268, [277]-281.

Extensive series of articles discussing the evolution of clothing, influence of nationality and climatic conditions upon clothing, style as an economic factor, harmful effects of the corset, imperfections in men's clothing such as belts and high detached collars, and evils of the military uniform.

- (30) ———.

1906. UEBER DIE KLEIDUNG. [Concerning clothes.] Zentbl. Kneippsche Heilverfahren 13: 73-76, 85-88.

History of clothes, their origin and evolution. Discussion of the question of tight clothing and the best distribution of clothing weight for men as well as women. An article of general rather than of scientific interest.

- (31) BEELY, F., and KIRCHHOFF, E.

[n. d.] DER MENSCHLICHE FUSS, SEINE BEKLEIDUNG UND PFLEGE. [The human foot, its clothing and care.] 112 p., illus. Tübingen.

Discusses the attributes of rational shoes and stockings from the physiological and hygienic viewpoints.

- (32) BENEDICT, A. L.

1908. CLOTHING—A HYGIENIC HERESY. Med. Times [New York] 36: 361-363.

A physician discusses the purpose of clothing and criticizes certain fashions on account of their effect on health. Considers the collar, the belt, and excessive clothing the chief faults of men's clothing, and inadequacy, tightness, and dragging weight the chief disadvantages of women's clothing.

- (33) BERGEY, D. H.

1918. THE PRINCIPLES OF HYGIENE; A PRACTICAL MANUAL FOR STUDENTS, PHYSICIANS, AND HEALTH-OFFICERS. Ed. 6, thoroughly rev., 543 p., illus. Philadelphia and London. W. B. Saunders Co.

Chapter 9 includes short discussions of the function of clothing, cleanliness in relation to clothing, and the injurious effects of improper garments. The chapter on military hygiene briefly touches upon suitable clothing for soldiers.

- (34) BERTHIER.

1901. CRITIQUE DES PRINCIPES DE LA CHAUSSURE DITE RATIONNELLE. [Criticism of the principles of so-called rational footwear.] Rev. Hyg. 23: 783-793, illus.

Comments on the universal wearing of improper shoes and the movement toward the "rational" shoes of Meyer. Admitting that Meyer's shoes are somewhat better than those commonly worn, the author shows with diagrams that they are not the proper type and that Meyer is erroneous in his idea of the natural shape of the foot and of the location of the axis of the foot.

- (35) BETTMAN, R. B.

1922. COMMON FOOT TROUBLES AS INDUCED BY SHOES. *Nation's Health* 4: 194-196, illus.

Discussion of the ills resulting from poorly fitting shoes and stockings. Common foot troubles such as corns, bunions, callouses, and weak and flat feet are discussed. The harmful effect of wearing overshoes for too long a period is mentioned.

- (36) BIGELOW, Z. E.

1920. THE HYGIENE OF CLOTHING. *Jour. Home Econ.* 12: 253-258.

Discusses as the "four most important factors which determine the hygienic value of a garment" the properties of the fiber, the properties of the fabric which are dependent upon composition, weave, weight, finish, and color, the properties of the garment which are dependent upon its construction, and those factors dependent upon the wearer such as age, health, occupation, and environment.

- (37) BLAQUIÈRE, D. DE.

1884-85. HOW SHOULD WE DRESS? THE NEW GERMAN THEORIES ON CLOTHING. *Leisure Hour* 33: 735-737. 1884. *Eclectic Mag.* (n. s. 41) 104: 273-277. 1885.

Outlines Jaeger's theory of having all garments made of wool, preferably knitted.

- (38) BOYER, J.

1918. THE HIGH HEEL IN MOTION PICTURE AND X-RAY. . . . *Sci. Amer.* 118: 102, illus.

Describes the various steps in the manufacture of heels, and the effect of heels on the gait as shown by the moving picture and on the bones of the foot as shown by the X-ray.

- (39) BOYLE, F.

1905. SAVAGES AND CLOTHES. *Mo. Rev.* [London] 20 (60): [124]-138.

Examples of the longevity, strength, and vigor of savages are cited in support of the author's contention that many human ills are due to the fact that civilized man does not go naked. Reviewed under the title "Why man should go unclothed" in *Current Lit.* 39: 1531.

- (40) BRADFORD, E. H.

1902. SHOE DEFORMITIES. *Amer. Orthopedic Assoc. Trans.* 15: 321-337, illus.

Foot deformities may be congenital or may be due to injuries or to defective footwear. The effect of shoes on feet may be determined by comparing the feet of a shoe-wearing race with those of a barefoot race. The muscles are weakened and the shape of the foot changed.

- (41) BRADY, W.

1916. PERSONAL HEALTH—A DOCTOR BOOK FOR DISCRIMINATING PEOPLE. 407 p. Philadelphia and London, W. B. Saunders Co.

Popularly written book of advice. Occasional reference is made throughout to the effect of clothing on health, and chapter 10 considers the subject in detail.

- (42) BRETTNER.

1913. EINE NEUE FORM DES NACHTHEMDES. [A new type of nightshirt.] *Aerzt. Polytech.* 35 (12): [177]-181, illus. (*Illus. Monatsbeilage* to *Ztschr. Krankenpflege u. Klin. Ther.*)

A garment devised for invalids is described. It opens down the front and has an apron in the back which can be pulled aside so that a bedpan can be easily slipped under the patient.

- (43) BUCHNER, H.

1897. GESUNDHEIT UND KLEIDUNG: EIN BEITRAG ZUR HYGIENE DER KLEIDERSTOFFE. [Health and clothing: a contribution to the hygiene of clothing.] *Gartenlaube* 45: 76-79, 88-91.

General discussion of the hygienic aspects of the fabrics and designs used for clothing, especially in regard to heat regulation of the body, moisture absorption, and ventilation. The work of Rubner, Rumpel, and other investigators is quoted and used as a basis for the article.

- (44) CAROTHERS, R.
1920. SHOES. *South. Surg. Assoc. Trans.* 32: 73-76.
The author contends that the majority of adults have acquired foot deformities from wearing ill-fitting shoes. These result in deformities elsewhere in the body.
- (45) CARPENTER, A.
1883. THE SANITARY ASPECT OF DRESS. *Sanit. Inst. Gt. Brit. Trans.* 4: 97-102.
Requests the Sanitary Institute to influence public opinion against fashions detrimental to health. The unhealthful aspects of improper shoes, tight clothing, and unsuitable fabrics are considered briefly.
- (46) CAVANAGE, F.
1907. THE CARE OF THE BODY. 292 p. New York, E. P. Dutton & Co.
Chapter 6 on clothing is devoted chiefly to criticism of the types of garments usually worn by men, women, and children.
- (47) CECIL, R. L.
1925. COLDS: CAUSES, TREATMENT AND PREVENTION. 111 p., illus. New York and London, D. Appleton & Co.
On pages 21 to 22, the author briefly discusses improper clothing as one of the factors in the causation of colds.
- (48) CERVIOITI, J. A.
1872. ÉTUDE SUR LES VÊTEMENTS CHEZ L'HOMME ET CHEZ LA FEMME DANS LEURS RAPPORTS AVEC L'HYGIÈNE. [A study of the clothing of men and women in its relation to hygiene.] 87 p. Paris. (Thesis no. 5.)
A general study from a hygienic viewpoint.
- (49) CHASSAIGNAC.
1853. [RAPPORT SUR UN TRAVAIL DE BROCA . . . DIFFORMITÉS DES ORTEILS DÉTERMINÉS PAR L'ACTION DES CHAUSSURES.] [Report on a work of Broca . . . deformities of the toes caused by the action of shoes.] *Bul. Soc. Chirurg. Paris* (1852/53) 3: 288-292.
A discussion by the author and others of an article by Broca dealing with the dissection of deformed feet. He points out that deformed feet due to pressure from shoes are more prevalent among women than men.
- (50) CHESNEY, L. M.
1908. HYGIENIC CLOTHING AND DISEASE. *Jour. Roy. Inst. Pub. Health* 16: 411-417.
Popular articles contending that a little constriction around the waist is better than supporting the clothing from the shoulders, that underwear should not be absorbent, and that many people are dressed too warmly.
- (51) CHEVALIER.
1905. HYGIÈNE DU VÊTEMENT. [Hygiene of clothing.] *Rev. Ther. Med. Chirurg.* 72: 685-694.
General discussion of the function of clothing and its effect on health. The influence of clothing on the regulation of temperature, on the skin, and on the internal organs are some of the topics discussed. The advantages and disadvantages of various garments are considered in detail.
- (52) CLARKE, J. J.
1898. THE DEFORMITIES AND SURGICAL AFFECTIONS CAUSED BY WRONGLY-SHAPED BOOTS AND SHOES. *Med. Press and Circ.* (n. s.) 66: 235-238, illus.
Discussion of abnormalities resulting from wrongly-shaped footwear and the treatment that should be applied.
- (53) CLEVELAND, C. H.
1862. CAUSES AND CURE OF DISEASES OF THE FEET: WITH PRACTICAL SUGGESTIONS AS TO THEIR CLOTHING. 111 p. illus. Cincinnati.
The author discusses the object of wearing shoes, the influences of fashion, the troubles caused by ill-fitting shoes, and the proper method of measuring for shoes. He proposes six essentials for properly constructed shoes.

- (54) COBB, E. M.
1926. SHOES FOR HEALTH. *Me. Agr. Col. Ext. Circ.* 93, [4] p., illus.
Describes normal and abnormal feet and the shoes producing each. Suggests daily foot exercises. Correct walking is shown by diagrams.
- (55) COLE, H. P.
1908. SHOES FOR CURE OF FLAT-FOOT. *Med. World* 26: 207-209, illus.
The author describes a special shoe designed to give proper support to the feet and to permit correct body carriage. He claims that such a shoe will prevent or correct flat feet.
- (56) CONOVER, I. D.
1926. IF THE SHOE FITS, IT KEEPS ITS SHAPE AND WEARS LONGER. *Woman's Home Companion* 53 (4): 124, illus.
Describes methods for telling whether a shoe fits and discusses the different kinds of shoe leathers and materials, especially in regard to their stretching properties.
- (57) COOK, A. G.
1911. THE ANTERIOR HEEL; A FURTHER CONTRIBUTION TO THE QUESTION OF BALANCE. *Amer. Jour. Orthopedic Surg.* 9: 37-59, illus.
The author illustrates the effect on the foot of shifting the center of gravity of the body weight and tells of the function of the anterior heel (an inverted isosceles triangular prism of leather placed obliquely across the bottom of the shoe, the vertex of the triangle being just behind the anterior arch).
- (58) COOLEY, A. M.
1913. HYGIENIC QUALITIES AND PHYSICAL ACTION OF FABRICS FOR CLOTHING. *Jour. Outdoor Life* 10: [1]-2.
General discussion of clothing fabrics written for a textbook on household arts and published in advance in this form.
- (59) COTTERILL, D.
1912. TILTING THE SOLES OF THE BOOTS, AND ITS USE AS A MEANS OF TREATMENT IN VARIOUS COMMON CONDITIONS. *Edinb. Med. Jour.* (n. s.) 8: 111-117, illus.
The author describes the mechanism of the foot and discusses faulty distribution of weight and its causes, wedges in the shoes to correct faulty conditions, flat-foot exercises, outtoeing and intoeing, and knock-knee.
- (60) CRANDON, L. R. G.
1906. FLEXIBLE BALANCING SHOES. *Boston Med. and Surg. Jour.* 155: 505-507, illus.
A proper shoe is not one that supports the foot but one that allows absolute freedom of motion. Such a shoe is described in detail.
- (61) ———
1908. ORTHOPEDIC HERESIES ON FEET AND THEIR TREATMENT. *Boston Med. and Surg. Jour.* 158: 537-544, illus.
Well-illustrated article showing types of shoes and their effect on the foot. Several cases are cited of feet incapacitated by poorly fitted shoes. The author advocates a "mechanical moccasin" for correcting some of the acquired deformities.
- (62) CRANOR, K. T.
1923. CLOTHING AND HEALTH. *Jour. Home Econ.* 15: 426-430.
Popular article stressing the importance of protecting the body from cold and dampness. Discusses the relative value of different fabrics and types of garments for this purpose and urges the use of well-fitting, clean clothing of suitable materials.
- (63) DARWIN, G. H.
1872. DEVELOPMENT IN DRESS. *Every Sat.* [Boston] (n. s. 2) 13: 348-351; *Eclectic Mag.* (n. s.) 26 (5): 610-617.
Treats the development of dress as analogous to the evolution of civilization. Men's clothing is considered chiefly.

(64) DELAVAN, A. H.

1923. HEALTH AND BEAUTY. FIRST AID FOR FOOT TROUBLE. *Good House-keeping* 77 (4): 90.

General discussion of foot maladies caused by ill-fitting shoes. Gives corrective exercises and methods of relieving pressure.

(65) DODSON, E.

1925. FEET AND SHOES. *Calif. Agr. Col. Ext. Serv. H[ome] D[emon.]* 169, [4] p., illus. (Reprinted as *Iowa Agr. Col. Ext. Serv., Home Econ. Bul.* 93, 1926; and as *N. Y. Agr. Col. (Cornell) Ext. Bul.* 149, 12 p., illus. 1926.)

Describes the normal foot and the care of the feet of infants, growing children, and adults. Special stress is placed on the requirements that shoes and stockings must meet to be comfortable and not deform the feet.

(66) DOWIE, J.

1839. OBSERVATIONS ON BOOTS AND SHOES, WITH REFERENCE TO THE STRUCTURE AND ACTION OF THE HUMAN FOOT. *Edinb. New Phil. Jour.* 26: 401-409.

The writer contends that shoes are often too short because the foot is measured when no weight is on it, that high-heeled shoes throw the body from its proper position, and that the muscles of persons who wear high heels become relaxed. He favors a "patent elastic shoe."

(67) ———.

1871. THE FOOT AND ITS COVERING, WITH DR. CAMPER'S WORK "ON THE BEST FORM OF SHOE." Ed. 2, 287 p., illus. London, Robert Hardwicke.

Contains Camper's essay on the structure and movements of the foot and the best kind of shoe. This is followed by a paper of Dowie's discussing the anatomy of the foot and the relation of its well-being to its covering.

(68) DRAPER, J. C.

1870. NATURE AND DRESS. *Galaxy* 9: [626]-631.

Discusses hygiene of clothing, action of the skin, and effect of tight clothing on the organs of the body. Gives methods and results of Sir Humphrey Davy's experiment on the heat-conducting power of materials, the effect of various textiles on the skin, and the odor-absorbing properties of textile materials. Also includes a brief history of clothes with particular attention to corsets and their ill effects.

(69) DREW, L. C.

1926. INDIVIDUAL GYMNASTICS: A HANDBOOK OF CORRECTIVE AND REMEDIAL GYMNASTICS. Ed. 3, 276 p., illus. Philadelphia, Lea & Febiger.

Pages 198 to 233 give a general discussion of the mechanics of the feet, including arches, standing position, and ill effects from shoes.

(70) DUNGLISON, R.

1844. HUMAN HEALTH: OR, THE INFLUENCE OF ATMOSPHERE AND LOCALITY; CHANGE OF AIR AND CLIMATE; SEASONS; FOOD; CLOTHING; BATHING AND MINERAL SPRINGS; EXERCISE; SLEEP; CORPOREAL AND INTELLECTUAL PURSUITS, ETC., ETC., ON HEALTHY MAN; CONSTITUTING ELEMENTS OF HYGIENE. New ed., 464 p. Philadelphia, Lea & Blanchard.

The influence of texture, color, and the shape of clothing on health is discussed. The conductance of caloric by fabrics, the absorption of odors by different colors, and the absorption of fever emanations by black garments are some of the topics included. A few references to early experiments on the subject add to the historical interest of the paper.

- (71) DUNLOP, J.
1914. FOOT-STRAIN; AN ANATOMICAL EXPLANATION WITH SUGGESTIONS FOR TREATMENT. Wash. Med. Ann. 13: 245-250.
Technical discussion of the anatomy of the feet with a description of flat or weak feet and the proper treatment for these ailments. Proper shoes are suggested as part of the treatment.
- (72) DYER, E.
1920. SHOES; MERCHANDISE INFORMATION FOR SALESPeOPLE. Carnegie Inst. Technol., Research Bur. Retail Training. Elem. Ser. 1, 61 p.
A pamphlet, written in the question and answer form, on leather, foot defects, and manufacture and fitting of shoes.
- (73) ———.
1921. MERCHANDISE MANUAL FOR SHOE DEPARTMENTS. Carnegie Inst. Technol., Research Bur. Retail Training. Gen. Ser. 1, 133 p., illus.
Material selected to help a sales person answer adequately the ordinary questions asked by customers and talk intelligently about shoes when showing them. The structure of the foot is shown in detail and careful instructions given for fitting shoes properly.
- (74) ELLIS, T. S.
1890. THE HUMAN FOOT: ITS FORM AND STRUCTURE, FUNCTIONS AND CLOTHING. Woods Med. and Surg. Monog. 6: 1-103, illus.
Detailed discussion of the structure of the foot with regard to natural and deformed bones and muscles. The author shows the reaction of the feet to tight, pointed shoes, short shoes, and high heels. Also discusses shoes and stockings from the standpoint of proper foot clothing.
- (75) ELMER, W. G.
1919. THE FOOT AND SHOE PROBLEM. N. Y. Med. Jour. 110: 786.
Describes the structure of the foot and the shoe which should be worn.
- (76) EMMONS, A. B.
1924. FEET, FLOORS, AND HEALTH. Nation's Health 6: 171-172.
Discusses foot comfort in its relation to floorings and shoes. Advocates floor coverings which give a firm gripping surface with some resiliency. Considers the proper selection of shoes especially for the growing child and for those who stand at work. The article is quoted in part in Lit. Digest 81 (May 3): 28-29.
- (77) ENGLE, H.
1925. FUSS UND SCHUH. [Foot and shoe.] Ztschr. Ärztl. Fortbild. 22: 273-276.
A résumé of information concerning feet and shoes. The choice of shoe depends upon the character of the foot. Shoes should neither bind nor irritate and should be suitable for the occasion.
- (78) EVANS, P. F. S.
1907. THE MANUFACTURE OF SOLE LEATHER FROM THE HYGIENIC POINT OF VIEW. Jour. Roy. Sanit. Inst. Trans. (1906) 27: 568-574.
Describes shoe leather adulterated with such materials as glucose, Epsom salts, and barium chloride, which dissolve out readily when coming in contact with moisture. This leaves very poor quality leather which wets through readily and allows moisture to reach the feet of the wearer.
- (79) FAIRWEATHER, S. D.
1918. BOOT HEELS AS A CAUSE OF FLAT FOOT, SOLDIER'S HEART, MYALGIA, ETC. Brit. Med. Jour. 1918 (v. 2): 313-314.
Maintains that heels cause a tendency toward flat foot and that the weight a person must carry increases with the elevation of the heel and displacement of the perpendicular.

- (80) FAIRWEATHER, S. D.—Continued.

1921. MODERN FOOTWEAR AS A CAUSE OF FATIGUE, MUSCULAR RHEUMATISM, AND FLAT FOOT. WITH NOTES ON AN IMPROVED TYPE OF BOOT. *Lancet* [London] 201: 1019-1022, illus. 1921; *Jour. Roy. Army Med. Corps* 39: 171-179, illus. 1922.

Maintains that the muscles of the foot and leg deteriorate when modern footwear is worn. The author does not approve of wearing even a low heel but believes any heel exerts a strain at different points on the foot.

- (81) FISCHER, A. W.

1928. UEBER FEHLER DES ÜBLICHEN SCHUHWERKS UND ÜBER NORMALSCHUHE. [Concerning the faults of the customary shoe, and concerning normal shoes.] *Deut. Med. Wchnschr.* 54: 382-384, illus.

The author discusses the discomfort and distortion of the bony framework of the foot caused by fault shoes. The normal shoe should conform to the normal position of the bones of the foot. The faults of high heels are pointed out.

- (82) FISCHER, E.

1925. DIE KULTURDEFORMATION DES FUSSES. EINE NEUE TECHNIK DES SCHUHLEISTENMODELLIERENS. [The growth deformation of feet. A new technique in the making of shoe forms.] *München. Med. Wchnschr.* 72: 1918-1920, illus.

A discussion of foot deformation as produced by improper shoes. The author describes the defects of shoes commonly worn and explains a new method of shoemaking in which the foot is properly measured and the shoes made to conform to the shape of the foot.

- (83) FLINN, D. E.

1886. OUR DRESS AND OUR FOOD IN RELATION TO HEALTH. 59 p. Dublin, M. H. Gill & Son.

Historical sketch of the clothing of men and women. Discusses the comparative hygienic value of different materials, the harmful effects of tight corsets, tight sleeves, excessive weights of clothing, tight heavy hats, and ill-fitting shoes with high heels.

- (84) FLOWER, W. H.

1882. FASHION IN DEFORMITY, AS ILLUSTRATED IN THE CUSTOMS OF BARBAROUS AND CIVILIZED RACES. 24 p., illus. New York, J. Fitzgerald & Co. (*Humboldt Libr. Pop. Sci. Lit.* 2 (28): 1-24, illus.)

Reviews the many bodily deformities which have been practiced by different races and discusses those brought about in modern life by wearing improper shoes and tight clothing.

- (85) FOOT REMEDY Co.

[1922.] SCIENTIFIC TREATMENT OF FLAT-FOOT. 5 v., illus. Chicago.

A general discussion of causes of flat feet, and of correct and incorrect posture. Corrective exercises arranged for 15 weeks' treatment are outlined.

- (86) FORD, M.

[n. d.] SELECTION OF SHOES. W. Va. Agr. Col. Ext. Div., Selection of Clothing 3, 4 p., illus.

Describes conditions which bring about weak feet and lists the requirements a shoe must meet in order not to cause weak or deformed feet.

- (87) FRIEDBERGER, E.

1925. ZUR HYGIENE DER KLEIDUNG INSBESONDERE DER MÄNNERKLEIDUNG IM SOMMER. [Hygiene of clothing, especially men's summer clothing.] *München. Med. Wchnschr.* 72: [1409]-1411.

Discusses the needs of the body for adequate temperature control and ventilation during hot weather. Points out beneficial changes in clothing styles which have resulted in lighter, less constrictive clothing for women, and soft collars, low shoes, and 2-piece suits for men. Compares men's and women's fashions from a hygienic standpoint with special attention to men's clothing.

(88) GALIPPE.

1917. INFLUENCE DE L'ÉQUINISME PROVOQUÉ (CHAUSSURES À HAUTS TALONS) SUR LA PHYSIOLOGIE DE LA STATION DEBOUT ET DE LA MARCHE. [Influence of induced standing-on-the-toe (shoes with high heels) on the physiology of the standing and walking positions.] *Bul. Acad. Méd. [Paris]* (3) 78: 726-731.

The author quotes Onimus's memoir of 1876 (see 178) of which he was reminded by the title of Quenu's article. (See 189.)

(89) GARRETT, A. E., and TOMALIN, H. F.

[n. d.] PURPOSE AND EFFICACY OF CLOTHING. 31 p. [London, Adams Bros. & Shardlow (Ltd.).]

Suitable clothing for men, women, children, and infants, including footwear, hats, gloves, and night wear, is considered. Recommends animal fibers for clothing. The author concludes that in the selection of present-day clothing insufficient attention is given to conductivity, moisture, texture, porosity to air, color, weight, and form.

(90) GERARD, W. VON M.

1923. FOOT DERELICTS OF INDUSTRIAL ARMIES. *Iowa Health Bul.* 26 (v. 8, no. 4): 10-16.

Report and discussion based upon the examination of the feet of a group of laborers. Improper shoes and lack of foot hygiene are given as causes of foot ailments. The author urges that the public be educated along this line in order to correct foot defects.

(91) GERSTER, C.

1891. WOLLE ODER LEINEN? [Wool or linen?] *Hygieia [Stuttgart]* 4: 329-336, 365-371.

Summary of data on the relative merits of these fibers for clothing. Many earlier studies are quoted.

(92) GIBBONS, H.

1876-77. THE HYGIENE OF DRESS. *Pacific Med. and Surg. Jour.* (n. s. 10) [19]: 49-56.

General consideration of the relation of dress to health. Discusses in particular the chest and abdominal covering with reference to compression and the physical harm this may cause.

(93) GIBSON, A.

1921. SOME ASPECTS OF THE MECHANISM OF THE HUMAN FOOT IN WALKING. *Jour. Orthopedic Surg.* (o. s. 19) 3: 188-195.

The author prefers the word "spring" to "arch." Describes how, in walking, the weight shifts from one part of the foot to the other and the springs readjust themselves according to this change.

(94) GILMAN, C. P.

1905. WHY THESE CLOTHES? *Independent* 58: 466-469.

Popular discussion of the ridiculous and unhealthful clothing worn by both men and women.

(95) GIRDNER, J. H.

1902. MAN AND HIS CLOTHES. *Munsey's Mag.* 27: [372]-374.

Popular article written by a physician who decries the fact that people think more of the decorative than the hygienic value of clothing. Points out particularly the unhealthful aspects of high heels and the undesirable restriction of long trousers and too tight hats, collars, and shirt bands.

(96) GLANTON, L. P.

1923. CLOTHING AND HEALTH. . . . *Nation's Health* 5: 782-783, 844, illus.

General popular discussion of dangers from too much clothing, constriction, lack of ventilation, heat, and improper footwear. Stresses the importance of comfort for greater efficiency of workers in every walk of life.

- (97) GLANTON, L. P.—Continued.
1924. THE RELATION OF CLOTHING TO HEALTH. Jour. Home Econ. 16: 185–191.
Discussion based on the literature on hygiene of clothing. Thirty-six references are included.
- (98) GODWIN, E. W.
1884. DRESS AND ITS RELATION TO HEALTH AND CLIMATE. Internatl. Health Exhib. Handbook. 80 p., illus. London, William Clowes & Sons (Ltd.).
A history of dress of both men and women from prehistoric times. The author decries the fact that individuals dress to please the eye rather than to preserve the health. The best fabrics for clothing are discussed.
- (99) GOIZET, L. H.
1876. HYGIÈNE DU VÊTEMENT. ÉTUDE SUR LES MOYENS D'ÉVITER LES MALADIES PAR LE CHOIX D'UN VÊTEMENT HYGIÉNIQUE. [Hygiene of clothing. A study on means of preventing diseases by the choice of hygienic clothing.] 48 p. Paris.
General treatment of the subject. Chapter 1 is on the physiological rôle of the skin. Chapter 2 deals with clothing in general—its purpose and selection from the standpoint of physical properties of fibers, especially color, conductivity of heat and electricity, absorption and evaporation of water, and air permeability. The underclothing, including corsets, is discussed in detail. Many illnesses apparently due to errors in the selection of clothing are cited.
- (100) GOLDSBURY, P. W.
1912. SKIN TENSION AND AIR BATHING. Lancet-Clinic [Cincinnati] 108: 200–201.
Maintains that clothing handicaps the natural functions of the body by altering the natural environmental conditions, the extreme instance being the case of footwear. Thus it brings about an economic waste of human efficiency. The author advocates air bathing. The article is popularized in The Burden of Clothes, Lit. Digest 45: 781. 1912.
- (101) GOLDSCHMIDT, M.
1897. DIE KLEIDUNG DES KRANKEN UND IHRE BEDEUTUNG IN DER KRAKENPFLEGE. [Clothing for the sick and its importance in nursing.] Ztschr. Krankenpflege 19: 185–189, 211–220, 237–241, 259–269, 289–292.
A compilation of data on the physical properties of different kinds of textiles and clothing. Their relation to the care of the sick is discussed at length.
- (102) GRAY, G.
1926. SOME SUGGESTIONS FOR KEEPING COOL IN HOT WEATHER. Hygeia [Chicago] 4: 365–366.
Lightweight loose clothing without belts and with low necks and short sleeves is advocated for summer wear.
- (103) GRENFELL, W. [T.]
1916. NOTES ON CLOTHING AGAINST COLD. Brit. Med. Jour. 1916 (v. 1): 86–87, illus.
Describes the winter customs of those living in Labrador and north Newfoundland. Discuss the material and construction of the jumper, gloves and mitts, trousers, boots, and socks commonly worn.
- (104) ———.
1928. "GRENFELL CLOTH" FOR ARCTIC AND TROPIC WEAR. Among the Deep-Sea Fishers [New York] 26 (1): 34–35.
Describes the clothing worn in the Arctic and the use of Grenfell cloth, a specially constructed cotton fabric, lightweight, durable, waterproof, windproof, and inexpensive. This material has also been found useful in the Tropics.

(105) GROSS.

1881. DER NATURGEMÄSSE SCHUH. [The normal shoe.] Gewerbeblatt Württemb. Jahrg. 1881: 443-456, 459-464, illus.

Discusses the deformation of children's toes by shoes that become too short. Disapproves of patent leather footwear on the ground that it does not permit ventilation. Overshoes should not be worn for too long a period. Illustrations show the shape of feet caused by wearing differently shaped shoes.

(106) GROSSMAN, J.

1917. THE INCREASING MENACE OF THE CONVENTIONAL SHOE. Med. Rev. of Reviews 23: 251-256, illus.

Maintains that the conventional shoe has distorted the shape of the feet of children and adults and is responsible for a vast majority of weak feet. The prevention and treatment of weak feet and suggestions for proper shoes to be worn during pregnancy are given.

(107) —.

1923. NECESSARY CARE OF THE FOOT IN INDUSTRY . . . Nation's Health 5: 375-381, illus.

The author discusses the causes and symptoms of various foot ailments and prescribes treatment for bunions, corns, hammertoes, metatarsalgia, and fractures. He specifies the requirements of a good shoe and recommends periodic examination of the feet.

(108) GUNTHER, G. R.

1863. UBER DEN BAU DES MENSCHLICHEN FUSSES UND DESSEN ZWECKMÄSSIGSTE BEKLEIDUNG. [The structure of the human foot and its most suitable clothing.] 34 p., illus. Leipzig and Heidelberg, C. F. Winter'sche Verlagshandlung.

Discusses the normal foot and its distortions brought about by improper clothing.

(109) GUILBERT, E.

1835. CONSIDÉRATIONS HYGIÉNIQUES RELATIVES À L'INFLUENCE DES VÊTEMENTS SUR NOS ORGANES, ACCOMPAGNÉES DE QUELQUES RÉFLEXIONS SUR LA MÉLANCOLIE. [Hygienic considerations relative to the influence of clothing on our organs, accompanied by some reflections on melancholy.] 23 p. Par.s. (Thesis no. 379.)

Discusses the effects of clothing on the development of the internal organs, of headbands on the development of the head, of very tight cravats on the circulation in the brain, of corsets on the thorax and abdomen, and of tight garters and shoes on circulation in the limbs.

(110) HANSEN, A. H.

1922. THE PROPHYLACTIC AND CORRECTIVE VALUE OF FOOTGEAR. Med. Rec. [New York] 101: 416-418, illus.

Discussion of the mechanical disturbances of the feet and limbs with causes and treatment. Describes in detail exercises and corrective shoes for such foot ailments.

(111) HARRINGTON, C.

1911. A MANUAL OF PRACTICAL HYGIENE FOR STUDENTS, PHYSICIANS, AND HEALTH OFFICERS. Ed. 4, rev. and enl. by M. W. Richardson. 850 p., illus. Philadelphia and New York, Lea & Febiger.

The functions of clothing and its effect on health are discussed briefly.

(112) HILL, L.

1928. ON CLOTHES. Practitioner [London] 121: 359-379.

Maintains that civilized man is much overdressed. Discusses present and past clothing customs of men, women, and children in tropic, arctic, and ordinary climates. Compares human clothing with the animal's natural covering to the advantage of the latter. Recommends clothing as light as possible, permeable to air, allowing free evaporation, becoming to the least degree wet with perspiration and not

- (112) HILL, L.—Continued.
clinging to the skin when wet. Points out that these properties are dependent on the nature of the weave rather than of the fiber. Describes the use of the katathermometer for evaluating the heat-retaining efficiency of clothing.
- (113) HITCHCOCK, M.
1920. TRAINING GROWING FEET AND EASING FRANTIC ONES. *Nor'west Farmer* 39: 1266-1267, illus.
Points out that the adult foot shows the importance of proper early training. Discusses the anatomy of the foot and the ailments caused by faulty shoes. Recommends properly shaped shoes and corrective exercises to care for the ailments.
- (114) HOFFA, A.
1899. DER MENSCHLICHE FUSS UND SEINE BEKLEIDUNG. [The human foot and its clothing.] 16 p., illus. Stahel'sche Verlags-Anstalt in Würzburg Königl. Hof-und Universitäts-Verlag.
Stresses the need of proper shoes for children as well as for adults. Discusses the importance of the true shape of the foot in the construction of shoes, misshapen feet and their attendant ills. X-ray pictures of deformed feet are given.
- (115) HOFFMAN, P.
1902. THE EFFECT OF FOOT-WEAR UPON THE FORM AND USEFULNESS OF THE FOOT. *St. Louis Courier Med.* 26: [401]-409; 27: 13-20, illus.
In a detailed discussion of comfortable and well-fitting shoes from the standpoint of the mechanical operation of the foot, the author holds that the straight position of the foot in standing is correct. He describes the effect of shoes on the feet in causing and preventing deformities, and believes that ill-fitting footwear is the cause of many internal disorders.
- (116) HOFFMANN, C. E. E.
1877. DIE ALLGEMEINE SCHUHAUSSTELLUNG IN BERN, IM SOMMER 1876. [The general shoe exhibition in Berne, summer of 1876.] *Corresp.-Bl. Schweiz. Ärzte* 7: 11-14, 39-43.
The author describes a group of exhibits which included plaster casts of deformed feet showing the results of improperly fitting shoes.
- (117) HOFFMANN, P.
1905. CONCLUSIONS DRAWN FROM A COMPARATIVE STUDY OF THE FEET OF BAREFOOTED AND SHOE-WEARING PEOPLE. *Amer. Jour. Orthopedic Surg.* 3: 105-136, illus.
This study showed that the feet of barefoot people resemble those of a child. The skin is soft, pliable, and free from callouses. When compressed by machine-made shoes, the feet may become deformed in a few weeks. The article is well illustrated with drawings. Many statistics are given.
- (118) HOLMES, B.
1891. THE UNREASONABLENESS OF MODERN DRESS. *North Amer. Practitioner* 3: 166-176, illus.
A physician describes the anatomy of the foot and trunk and discusses in detail the harmful effects of the modern shoe and corsets.
- (119) HOPKINS, M. A.
1919. PREVENTION OF CRUELTY TO FEET. *Rural Manhood* 10: 419-420.
Describes the effect of shoes on the feet and gives exercises for correcting foot ailments.
- (120) HUMPHREY, G. M.
1884. HEALTH. *Sanit. Rec. (n. s.)* 5: 149-154.
An address before the sixth congress of the Sanitary Institute of Great Britain by its president. The unhealthful aspects of footwear and the harm done to infants by the use of binders are discussed.

- (121) HUTCHINSON, W.
1907. SOME DELUSIONS ABOUT DRESS. . . . Cosmopolitan 44: 164-168.
Points out that tight-fitting and heavy clothes interfere with respiration, perspiration, and freedom of movement. Colds are due not to thin clothing and exposure, but to bad air and little sleep. Advocates woven materials.
- (122) JAEGER, G.
1880. DIE NORMALKLEIDUNG ALS GESUNDHEITSSCHUTZ. [Normal clothing as a protection of health.] 182 p. Stuttgart, W. Kohlhammer.
Jaeger clothing is recommended and its healthful properties discussed.
- (123) ———.
1885. UEBER DIE ERFAHRUNGEN MIT WOLLEKLEIDUNG, UND ÜBER NATIONAL-TRACHT. [Experience with wool clothing and the national dress.] 24 p. Stuttgart, W. Kohlhammer.
Pamphlet in which the author sets forth his personal conviction that woollen clothing is the most healthful.
- (124) ———.
1891. SELECTIONS FROM ESSAYS ON HEALTH-CULTURE AND THE SANITARY WOOLEN SYSTEM. Translated from the German. Ed. 2, rev. and enl., 216 p. New York. Dr. Jaeger's Sanitary Woollen System Co.
The author maintains that dressing entirely in wool will cure many human ills and discomforts.
- (125) ———.
1892. ILLUSTRATED CATALOG AND PRICE LIST OF DR. JAEGER'S SANITARY WOOLEN SYSTEM CO. Ed. 12, 68 p., illus. New York.
Pamphlet advertising the Jaeger woollen garments and bedding. Discusses hygienic properties of textile fibers and elaborates Jaeger's views concerning the desirability of wearing and using only woollen garments.
- (126) JAEGER, H., and JAEGER, A.
1906. HYGIENE DER KLEIDUNG. [Hygiene of clothing.] 232 p., illus. Stuttgart, E. H. Moritz.
Considers such subjects as physical properties of clothing, changes in clothing as the result of wear, foot and foot coverings, effect of constrictive clothing on the bones of the torso and on the internal organs, clothing reform, correlation of clothing to the progress of civilization, clothing in relation to the health and well being of women in professional life, business clothing, and the hygienic testing of clothing fabrics shown graphically.
- (127) JAEGER, J., and WOLZOGEN, I. VON.
1910. ITALIENISCHE RENAISSANCEGEWÄNDER UMGESTALTET FÜR NEUE FRAUENTRACHT. [Italian renaissance clothing remodeled for women's wear to-day.] Illus. Jena. [Original not seen. Abstract in Hyg. Rundschau 21: 646. 1911.]
Recommends the modes of clothing worn at an earlier day in Italy on the ground that the garments did not constrict the body nor drag on the ground and were therefore more hygienic.
- (128) JAMIESON, W. A.
1912. THE CARE OF THE SKIN IN HEALTH. 109 p., illus. London, Henry Frowde & Hodder & Stoughton.
In chapter 4 entitled "Clothing and Diet," the author urges loose, lightweight, and comfortable but warm clothing for all parts of the body. The texture of the material used should be determined by the irritability of the skin of the individual.
- (129) JESSOP, C. M.
1887. ANCIENT DRESS COMPARED WITH MODERN IN RELATION TO DISEASE. Brit. Med. Jour. 1887 (v. 2): 614-618.
General discussion of the development of clothing with special attention to those features of woman's dress which prove harmful to her health. Men's clothing is discussed briefly, mainly from the standpoint of convenience and appearance rather than health.

- (130) KAHN, F.
1919. DER HOHE ABSATZ. [The high heel.] Bl. Volksgsundhtspflege 19: 28-32, illus.
Discussion of the evils resulting from high heels. X-ray pictures showing the bones of the foot in normal and high heels illustrate deformities due to high heels. Also gives X-ray photographs of the knee joint and cap with different height heels showing how the knee joint and cap are displaced when high heels are worn.
- (131) KER, A.
1888. HEALTHY CLOTHING. (In Edinb. Health Soc. Health Lecturers (8) 1888: 42-54. MacNiven & Wallace.)
Gives a general account of the types and purposes of clothing. Such subjects as tight and loose clothing, effect of dyes on the skin, covering for the feet, and the unhygienic aspects of clothing worn by men, women, and children are discussed.
- (132) KINNE, H., and COOLEY, A. M.
1913. SHELTER AND CLOTHING. A TEXTBOOK OF THE HOUSEHOLD ARTS. 377 p., New York, The Macmillan Co.
One chapter is devoted to a very general discussion of the hygiene of clothing.
- (133) ——— and COOLEY, A. M.
1916. CLOTHING AND HEALTH, AN ELEMENTARY TEXTBOOK OF HOME MAKING. 302 p., illus. New York, The Macmillan Co.
Notwithstanding the title, this is chiefly a general text on textiles and clothing construction, written for girls. The selection and care of clothing is included but only a few pages are given to its hygienic aspects.
- (134) KLEINBERG, S.
1923. FLAT OR WEAK FEET IN CHILDREN. Arch. Ped. 40: 1-14, illus.
General discussion of flat feet, pointing out their prevalence among children, naming improper footwear as one of nine possible causes for this condition, and describing the symptoms and treatment. One small section deals with the properly fitting shoe.
- (135) KRATSCHEMER, F.
1894. DIE BEKLEIDUNG. [The clothing.] (In Weyl, T. ed. Handbuch der Hygiene. Bd. 1: [357]-414, illus. Jena, Gustav Fischer.)
Clear, concise resumé of the data available on the physical characteristics of clothing and fabrics. A bibliography of 71 references and an index are included. A supplement dealing with the Jaeger system of underwear is given.
- (136) LAHMANN, [H.]
1887. DR. LAHMANN'S REFORM. EINE KRITIK DER PROF. DR. GUSTAV JAEGER'SCHEN WOLBEKLEIDUNGSLEHRE SEELENLEHRE UND HEILTHEORIE. [Dr. Lahmann's reform. A criticism of Dr. Gustav Jaeger's woolen-clothing doctrine, soul doctrine, and health theories. 95 p. Stuttgart, Sanitätsverlag.
Lahmann rejects Jaeger's theories as to the superior value of Jaeger's woolen goods for clothing and bedding. As an example of Jaeger's unsubstantiated belief, the author points to Jaeger's statements that perspiration is taken up by woolen garments without imparting odor to them, the odor being retained on the skin. Criticizes Jaeger's claim for the specific virtues of his woolen goods.
- (137) LAHMANN, H.
1898. DIE REFORM DER KLEIDUNG. [The reform of clothing.] Aufl. 3. 140 p., illus. Stuttgart, E. Mohrmann.
Advocates a clothing reform for men, women, and children. The largest section is devoted to women's clothing.

(138) LANE, W. A.

1895. SOME OF THE CONSEQUENCES OF WEARING BOOTS. *Clin. Jour.* 6: 226-234, illus.

Detailed anatomical discussion of feet and their mechanism. The author shows how incorrectly fitting shoes may be the cause of weak ankles, ingrowing toenails, bunions, hammer-toes, corns, varicose veins, knockknees, lateral curvature and dorsal excurvature, flat foot, lack of proper muscular development, and a limitation in chest development through incorrect standing.

(139) LANE-CLAYTON, J. E.

- [1921.] HYGIENE OF WOMEN AND CHILDREN. 354 p., illus. London, Henry Frowde & Hodder & Stoughton.

Pages 73 to 131 deal with the various aspects of clothing for women and children. Clothing is used for decency and for protection against changes in temperature. The author stresses that healthful clothing should be warm, loose, lightweight, and permeable. The clothing of women is considered in detail with special discussions on clothing during pregnancy and the psychological aspects of dress. Recommendations for suitable footwear are included in connection with a discussion of the feet.

(140) LASSAR, O.

1884. BEKLEIDUNG UND HAUTPFLEGE, BADE-UND WASCHANSTALTEN. [Clothing and care of the skin, public baths and washing places.] *Deut. Vrtljschr. Offentl. Gsundhpflege* 16: 26-33.

Discusses the dangers of wearing dirty clothing and the importance of disinfection. Recommends waterproof clothing which permits ventilation. The author is not in favor of the Jaeger wool system. Proper footwear is also discussed.

(141) LE BOSQUET, M.

1907. PERSONAL HYGIENE. 232 p., illus. Chicago, Amer. School Home Econ.

The chapter entitled "The Hygiene of Clothing" discusses the amount and kind of clothing to be worn under different temperature conditions and the physiological dangers of wearing improperly constructed clothing.

(142) LEE, B.

1884. A SHOE THAT WILL NOT PINCH—A SHORT STUDY IN THE HYGIENE OF THE FEET. *Sanitarian* 12: 493-503, illus.

The author explains the cause of bunions and ingrowing toenails. Diagrams are given showing the shape of the normal and deformed foot and the correctly curved shoe sole in contrast to the usual straight form.

(143) LEIBY, C. I.

1926. TEACHING THE HYGIENE OF CLOTHING. *Jour. Home Econ.* 18: 267-268.

Report of a committee of the textile section of the American Home Economics Association. A score card is presented.

(144) LENGFELLNER, K.

1908. BEITRAG ZUR LOSUNG DER SCHUHELEISTENFRAGE. [Notes on the solution of the shoe-last problem.] *Ther. Rundschau* 2: 743-745.

Discussion of foot deformities brought about by improperly fitting shoes. The author pays particular attention to flat foot which he believes in time will be a general condition.

(145) LENS.

1926. CLOTHING AND HEALTH. *New Statesman* [London] 26: 353-354.

A tirade against the clothing customs of mankind. Tight clothing is condemned, and absorbent fabrics of loose texture are advocated for wear next to the skin. The work of Hess and Hill on the transmission of ultra-violet light by fabrics is reviewed.

- (146) LEROY, A.
1772. RECHERCHES SUR LES HABILLEMENTS DES FEMMES ET DES ENFANS, OU EXAMEN DE LA MANIERE DONT IL FAUT VÊTIR L'UN & L'AUTRE SÈXE. [Study of the clothing of women and children or an examination of the manner in which both sexes must be clothed.] 347 p. Paris, Le Boucher.
General discussion objecting to the clothing of women and children in fashion at that time. The practices of various countries are cited. Of historical interest.
- (147) LESSER, [L.] VON.
1905. UEBER DAS SCHUHWERK. [Concerning shoes.] München. Med. Wchnschr. 52 (2): 2347-2348. 1905. Med. Klinik 2: 113-116. 1906.
Detailed discussion of flat foot. The author believes that stockings which are not made specifically for the right and the left foot, the weight of the bed clothing, and the position of the feet in bed are all contributing causes of this condition.
- (148) LEWIN, P.
1925. DO YOUR FEET HURT? Hygela [Chicago] 3: 317-319, illus.
General discussion of the best type of shoe for the majority of people, taking into account the flexibility of the shank, the type of fastening, and the height of the heel. The injurious effect of tight garters is mentioned. The greater part of the article discusses exercise and general care of the feet.
- (149) LEWIS, D.
1886. THE DIO LEWIS TREASURY. 844 p., illus. New York, James R. Barnett & Co.
A portion of the book is devoted to a consideration of dress and shoes in relation to tuberculosis, and deformities brought about by fashion. Suitable athletic costumes for women are described as well as children's clothing.
- (150) LITTLE, E. M.
1914. BOOTS AND SHOES FROM HISTORICAL AND SURGICAL POINTS OF VIEW. Lancet [London] 186: 1738-1745, illus.
The author describes the foot and discusses the strain, flat foot, hallux flexus or rigidus, metatarsalgia, and ingrowing toenail caused by improper footwear including stockings and socks as well as shoes. General discussion is given of shoe modifications for different ailments. The functions of the ideal shoe are protection and support without impeding any normal functions of the foot.
- (151) LOWER, F. S.
1915. FOOT AILMENTS. WITH SPECIAL REFERENCE TO CORRECTION OF RELAXED ARCHES BY MEANS OTHER THAN FOOT PROPS. Ill. Med. Jour. 27: 189-192.
General discussion of foot ailments and pains that the author considers caused by ill-fitting shoes. Gives treatment for these deformities and recommends various types of adhesive strapping as braces.
- (152) MCARTHUR, L. L.
1886. HYGIENIC CLOTHING. Chicago Med. Jour. and Examiner 52: 144-153.
Physical properties of textile fibers, heat conductance and hygroscopic power of fabrics, and form of garments are all considered from the standpoint of their effect on health. The author describes and recommends a fabric for underwear which is knitted of cotton with loose lamb's wool incorporated in it.
- (153) MACFADDEN, B. A.
1926. FOOT TROUBLES. 205 p., illus. New York, Macfadden Publications.
Detailed account of the evolution and structure of the foot. Discusses various ailments of the foot and their cause and treatment. Advocates the low heel and broad shoes.

- (154) MCGOWAN, E. B., and WAITE, C. A.
1919. TEXTILES AND CLOTHING. 268 p., illus. New York, The Macmillan Co.
A few paragraphs deal with the general aspects of healthful clothing.
- (155) MCGOWN, J.
1926. ON A FIRM FOOTING. AN ARTICLE ON CARE OF THE FEET AND SELECTION OF SHOES. *Hygeia* [Chicago] 4: 627-629, illus.
The author believes that tile floors and cement walks cause many foot troubles. A discussion is given of proper methods of walking, causes of fallen arches, height of heels, exercises beneficial to the feet, cleanliness of feet and stockings, and constricted circulation caused by tight garters.
- (156) MARSHALL, H. W.
1918. REVISED IDEAS CONCERNING FOOT DEFECTS AND ORTHOPEDIC FOOTWEAR. *Boston Med. and Surg. Jour.* 178: 428-432.
The author outlines the injuries done by tight shoes or stockings, describes symptoms of a few deformities, and recommends treatment.
- (157) ———.
1922. A COMPILATION OF CURRENT NOTIONS ON FEET. TABULATED FROM INQUIRY MADE OF ONE HUNDRED ORTHOPEDISTS AND THIRTY-FIVE NON-MEDICAL MEN. *Nation's Health* 4: 402-404, 462-464.
Compilation of the replies received from a questionnaire pertaining to deformed feet, prepared by the author and distributed to orthopedists and retail shoe merchants.
- (158) MARTIN, M. E.
1924. PUTTING YOUR BEST FOOT FORWARD. *Purdue Agr. Ext. Bul.* 124, 8 p., illus.
Discussion in detail of the selection and care of shoes and stockings from the point of view of paying the least possible amount for the service and comfort demanded of footwear.
- (159) MARTINEAU, H.
1859. DRESS AND ITS VICTIMS. *Once a Week* 1: 387-391.
Advocates loose clothing which does not cramp the body and is sufficient for protection.
- (160) MELOCHE, G. L.
1926. GOOD-FITTING SHOES FOR EVERY MEMBER OF THE FAMILY. *Wis. Agr. Col. Ext. Circ.* 191, [12] p., illus.
Discusses the requirements for a good shoe and shows the effect of poor shoes on the foot and on body posture.
- (161) MENIÈRE, P.
1837. LES VÊTEMENTS ET LES COSMÉTIQUES. [Clothing and cosmetics.] 93 p. Paris. (Thèse, Concours Hyg. 1837.) [Abstract in *Gaz. Méd. Paris* (2) 6: 62. 1838.]
In Part I, the author considers clothing from the viewpoints of texture, color, relation to age and sex, profession, climate, and design. Corsets are discussed in particular.
- (162) MEYER, G.
1897. KLEIDUNG. [Clothing.] (In *Eulenberg, A. Real-Encyclopädie der gesammten Heilkunde Medicinisch-chirurgisches Handwörterbuch für praktische Aerzte.* Ed. 3, 12: 313-367, illus. Wien and Leipzig, Urban & Schwarzenberg.)
Contains a general and comprehensive treatment of the purpose of clothing, and its physical and chemical properties from the hygienic point of view. Discusses dangers of wearing old and worn clothing, the points to be considered in selecting clothing for specific circumstances such as climate, seasons, occupations, sex, and age. Corsets and footwear are discussed in particular.
- (163) MEYER, G. H.
1858. DIE RICHTIGE GESTALT DER SCHUHE. . . . [The correct shape of the shoe.] 30 p., illus. Zürich, Meyer & Zeller.
Discussion of the ill effects produced by the wearing of shoes that do not fit. The author prefers shoes to top-boots and advocates square-toed shoes which give more room for the toes.

- (164) MEYER, H.
1863. WHY THE SHOE PINCHES; A CONTRIBUTION TO APPLIED ANATOMY. 40 p., illus. Translated from German by J. S. Craig. New York, R. T. Trall Co.
Functions of shoes, structure of the foot, distortions brought about by improper soles and ill-fitting shoes, and proper design of sole, heel, and upper leather of shoes, are discussed.
- (165) MEYER, H. VON
1883. ZUR SCHUHFRAGE. [The shoe question.] Bl. Gsndhtspflege 12: [65]-69.
In a somewhat controversial article, the author discusses correct shoes and emphasizes the importance of wearing shoes in which the great toe can be in its natural position.
- (166) ———
1888. ZUR SCHUHFRAGE. [The shoe question.] Ztschr. Hyg. 3: [487]-507, illus.
One of a series of articles on hygiene composing a volume edited by R. Koch and C. Flügge. The author discusses in detail the disorders that may result from improper shoes and describes a hygienic shoe. Flat feet, run-over heels, and the effect of the dislocation of the big toe on the structure of the rest of the foot are some of the topics considered. Many diagrams are included.
- (167) MEYLAN, G. L.
1909. THE EFFECT OF CLOTHING ON HEALTH. Psychotherapy 2 (3): 85-92, illus.
The proper selection of clothing is discussed with regard to maintaining the normal body temperature, the proper amount according to both external and internal conditions, and the little consideration of hygiene given by fashion dictators. Some suggestions are given for footwear, under-clothing, and outer clothing.
- (168) MILLIKIN, M.
1914. THE FOOT AS AFFECTED BY THE MODERN SHOE. Ohio State Med. Jour. 10: 674-678.
Discussion of the causes of flat feet and the effect of certain features of shoes, such as pointed toes and high heels, on the shape of the foot and the posture in general. Gives specifications for shoes for a normal foot.
- (169) MILLS, R.
1926. MOCCASINS, AN IDEAL OUTDOOR FOOTGEAR BEQUEATHED US BY THE AMERICAN INDIAN. Amer. Forest and Forest Life 32: 421, illus.
Describes the construction of a moccasin and explains why it is a comfortable and proper footgear.
- (170) MOJE, H. A.
1919. PUTTING THE FLAT FOOT FORWARD. Illus. World 30: 731-732, illus.
Suggestions are given for fitting shoes and curing flat feet. The author insists that the shoe fit the foot and not the foot fit the shoe.
- (171) MONTGOMERY, E. E.
1920. SELECTION OF FOOT WEAR. N. Y. State Dept. Farms and Markets, Agr. Bul. 132: 169-171.
Suggestions are given for selecting footwear with regard to fit and material. The care of the shoe is also described.
- (172) MORTON, D. J.
1916. QUESTIONS RELATIVE TO THE FEET AND THEIR CARE. Hahnemannian Mo. 51: 405-417, illus.
Anatomical discussion of the position of the feet in walking and standing. Considers the effect of heels (rubber and high) on the foot and defects of the feet caused by shoes. Proper footwear and its care is also discussed.

(173) MOSHER, B. B.

1899. REMARKS ON MODERN FOOT-CLOTHING. Brooklyn Med. Jour. 13: 689-697, illus.

The author urges shoe reform, maintaining that the public thinks more of appearance than comfort and health in the matter of footwear.

(174) MULLANE, N.

1920. HEALTH AND BEAUTY; THE SCIENTIFIC CARE OF THE FEET. Good Housekeeping 71 (4): 76, 79-80, illus.

Discusses the effect of improper shoes on the foot, prescribes a proper shoe, and tells how to determine when it fits correctly. Various foot ailments and their treatment are also considered.

(175) NEUMANN, O.

1901. MODE UND HYGIENE. [Fashion and hygiene.] Bl. Volksgndhtspflege 1: 149-154.

Discusses clothing as well as other matters in which fashion influences customs. Shoes, hats, and restricting garments are some of the subjects discussed from a hygienic aspect.

(176) NUTT, J. J.

1925. DISEASES AND DEFORMITIES OF THE FOOT. Ed. 2, 309 p., illus. New York. E. B. Treat & Co.

Pages 13 to 278 give a general discussion of deformed and diseased feet. Pages 278 to 290 deal with foot apparel, discussing in detail stockings and shoes. A study is made of heels, toes, shank or waist of the shoe, and shape of sole. Discusses the action of the feet in standing, walking, and at rest.

(177) ODELL, A.

1928. FEET AND SHOES. Utah Agr. Col. Ext. Circ. (n. s.) 10, 8 p., illus.

Gives directions for selecting proper shoes and stockings for the child and adult, with suggestions for foot exercises. A description of the normal and abnormal foot is included.

(178) ONIMUS.

1878. DES DÉFORMATIONS DU PIED ET DES TROUBLES GÉNÉRAUX DÉTERMINÉS PAR LES CHAUSSURES À TALON HAUT ET ÉTROIT. [Some foot deformities and some general differences produced by footwear with high and narrow heels.] Bul. Soc. Méd. Paris (2) 12: 6-13.

General discussion of the deformities of the foot such as contraction of the muscles and displacement of the bones caused by incorrect shoes especially those with high heels. Gives treatment of these maladies. The case of a young girl who suffered with them is reported. The article is discussed in the same journal on pages 13 to 14. (See 88.)

(179) O'REILLY, A.

1924. SHOES. Jour. Missouri State Med. Assoc. 21: 417-418.

Discussion of ill-fitting shoes from the standpoint of economic loss and hygiene, and of the essential features of a good shoe.

(180) OSGOOD, R. B.

1925. THE SHOE QUESTION—AND SOME ANSWERS. Nation's Health 7: 22-23, illus.

Discusses the bad effects of improper shoes and describes proper shoes for normal and for deformed feet.

(181) PAGE, C. E.

1896. SOMETHING ABOUT CLOTHING: ITS USES AND ABUSES; WITH A POINTER FOR ATHLETES. Phila. Polyclinic 5: 464-466.

Letter from a physician advocating that fewer and lighter-weight garments be worn.

- (182) PAGET, J.
1874. NOTES OF A CLINICAL LECTURE ON MALADIES PRODUCED BY BOOTS AND SHOES. *Student's Jour. and Hosp. Gaz.* [London] 2: 195-196.
General description of men's and women's feet and of the deformities caused by compressing the toes with tight and narrow shoes. Treatment is suggested.
- (183) PAINTER, C. F.
1927-28. SHOEING PROBLEMS AND THE HUMAN FOOT. *Boston Med. and Surg. Jour.* 197: 254-257.
General article against the use of modern shoes. Describes the deformities caused by variations in the tarsus, metatarsus, and phalanges. Attacks fashion as set forth by the stylists of the shoe manufacturers.
- (184) PARKER, C. A.
1924. CHOOSING THE CORRECT SHOE. *Hygeia* [Chicago] 2: 489-491.
The author recommends that first the foot be made as near normal as possible either by operation or exercise and then the proper shoe fitted to the foot. He discusses the structure of the shoe and the essential features of a good one.
- (185) PARKES, L. C.
1895. THE ELEMENTS OF HEALTH, AN INTRODUCTION TO THE STUDY OF HYGIENE. 246 p., illus. Philadelphia, P. Blakiston Sons & Co.
One chapter contains a general discussion of clothing from the standpoint of health. Considers the use, amount, bad effect of tight garments, clothing for different ages, and general cleanliness in clothes.
- (186) ——— and KENWOOD, H. R..
1902. HYGIENE AND PUBLIC HEALTH. Ed. 2, 763 p. Philadelphia, P. Blakiston Son & Co.
General discussion of the purpose and requirements of clothing and the various materials used for it. The authors describe healthy clothing, advising against corsets, tight sleeves, and ill-fitting shoes.
- (187) [PECK, J. L.]
1871. DRESS AND CARE OF THE FEET: SHOWING THEIR NATURAL PERFECT SHAPE AND CONSTRUCTION; THEIR PRESENT DEFORMED CONDITION; AND HOW FLAT-FOOT, DISTORTED TOES, AND OTHER DEFECTS ARE TO BE CORRECTED; WITH DIRECTIONS FOR DRESSING THEM ELEGANTLY YET COMFORTABLY; AND HINTS UPON VARIOUS MATTERS RELATING TO THE GENERAL SUBJECT. 202 p., illus. New York, S. R. Wells.
General discussion of construction of the feet, both natural and deformed, with directions for preventing and curing deformities.
- (188) PORTER, J. L.
1911. FOUR ESSENTIALS IN THE TREATMENT OF PAINFUL FEET. *Surg. Gynecol. and Obstet.* 12: 47-49.
Discusses briefly the effect of bedroom slippers on the feet and describes in detail the shoes and exercises to be used in cases of weak feet.
- (189) QUÉNU, E., and MÉNARD.
1917. INFLUENCE DE L'EQUINISME PROVOQUÉ (CHAUSSURES À HAUT TALONS) SUR LA PHYSIOLOGIE DE LA STATION DEBOUT ET DE LA MARCHE. [Influence of induced standing-on-the-toe (shoes with high heels) on the physiology of the standing and walking position.] *Bul. Acad. Méd.* [Paris] (3) 78: 634-646. illus.
Study of the immediate effects during walking and standing brought about by high heels. Discusses the pathology of feet from two points of view; the standing positions and the walking position. Experiments dealing with bare and shod feet are reported. Discussion and comments by Barrier, Kirmisson, and Linossier follow the article on pages 646 to 648.

(190) REGNAULT, F.

1894. DIRECTION DU GROS ORTEIL PAR RAPPORT AU BORD INTERNE DU PIED. CONSÉQUENCES POUR LA CHAUSSURE. [Direction of the big toe in relation to the inner edge of the foot. Consequences for the shoe.] Compt. Rend. Soc. Biol. [Paris] 46: 315-316.

Short discussion of how the big toe is bent under different circumstances. The author states that it has been found that the big toe naturally bends slightly inward; therefore, the so-called "rational" square-toed shoes are not correct, but extremely pointed toes also should be avoided.

(191) RENO, W. W.

1914. SHOES FOR ALL PEOPLE BY PRESCRIPTION. Med. Times [New York] 42: 173-178, illus.

Gives statistics showing the number of people wearing poor shoes and discusses the resulting foot deformities and loss in body efficiency. Detailed instructions are given for securing and fitting proper shoes.

(192) RICHARDSON, B. W.

1880. DRESS IN RELATION TO HEALTH. Gentlemen's Mag. [London] 246 (Apr.): 469-488; Pop. Sci. Mo. 17: 182-199.

The harm caused by too tight garments, the need of adapting the clothing to the season, ventilating power of clothing, color in dress, and skin irritations caused by dyes in clothing are the topics considered. Major attention is given to the first two subjects.

(193) RITSCHL, A.

1915. SPITZFUSSSTIEFEL. [Pointed-toed shoe.] München. Med. Wchnschr. 62: 799, illus.

Description of a simple device designed to keep the foot in a position favorable to recovery from lameness caused by the wearing of pointed-toed shoes.

(194) ———.

1915. VOR-UND NACHTEILE DES STIEFELABSATZES SOWIE DIE AUFGABEN EINER VERNUNFTGEMÄSSEN FUSPFLEGE. [Advantages and disadvantages of the boot heel as well as the problem of the proper care of the feet.] Deut. Med. Wchnschr. 41: 830-832, 852-854, illus.

Diagrams are given to show the effect of high heels on the whole weight-bearing mechanism of the body as well as on the foot itself. Points out the importance of the condition of the feet in determining the strength and well-being of the entire body. Advocates a more general enlightenment of the public concerning properly constructed shoes.

(195) ROBINSON, M. E.

1926. DON'T PUT YOUR BEST FOOT FORWARD: HAVE TWO EQUALLY GOOD FEET ALWAYS ON REVIEW. Successful Farming 24: 119-120, illus.

Defines the different kinds of shoes and shoe materials. Specifications are given for the correct shoe.

(196) ROUMAILLAC.

1919. D'UNE MEILLEURE UTILISATION DU GILET DE FLANELLE AU POINT DE VUE HYGIÉNIQUE. [Concerning a better use of the flannel jacket from the point of view of hygiene.] Jour. Med. Bordeaux (n. s.) 90: 406.

The author contends that flannel underwear comes in too close contact with the skin, prevents proper respiration and evaporation of perspiration, and often becomes stiff and causes a rash. A garment of linen or cotton with an open-mesh weave is recommended as suitable to be worn underneath the flannel. Its loose weave allows circulation of air and by preventing direct contact between the skin and the flannel perspiration is aided and rash prevented.

(197) RUBNER, M.

1893. UEBER DEN WERTH UND DIE BEURTHEILUNG EINER RATIONELLEN BEKLEIDUNG. [Concerning the value and importance of rational clothing.] Deut. Vrtljschr. Öffentl. Gsundhspflege 25: 471-494.

Resumé of some of the conclusions drawn by the author from his extensive experimental studies of clothing. The history of costume, the superior wearing quality of hand-woven materials, the practical value of the conservation of body heat by clothing, and the effect of clothing on the functions of the skin are some of the topics considered.

(198) ———.

1897. ZUR HYGIENE DER FUSSBEKLEIDUNG. [The hygiene of footwear.] Arch. Hyg. 31: [217]-258, illus.

The author considers the thickness, weight, specific gravity, porosity, and heat conductivity of shoe leathers as they relate to the hygiene of shoes. The ventilation and roughness of the surface of shoes and the rightly made, good-fitting shoe are also discussed. Loosening laces helps in cases of swollen feet.

(199) ———.

1897. EXPERIMENTELLE UNTERSUCHUNGEN ÜBER DIE MODERNEN BEKLEIDUNGSSYSTEME. [Experimental investigations on the modern clothing system.] I. THEIL: EMPIRISCHE REFORMBEWEGUNGEN. [Part 1: Empirical reform movements.] Arch. Hyg. 29: [269]-303. II. THEIL: HYGIENISCHE GESICHTSPUNKTE ZUR BEURTHEILUNG EINER KLEIDUNG. [Part 2: Hygienic view-point of the evaluation of clothing.] Arch. Hyg. 31: [142]-215, illus. III. THEIL (SCHLUSS): BEURTHEILUNG DER VERSCHIEDENEN BEKLEIDUNGSSYSTEME. [Part 3 (conclusion): Evaluation of the different clothing systems.] Arch. Hyg. 32: 1-132, illus.

Part 1 includes an introductory discussion of the purpose of clothing, its hygienic aspects, and its relation to civilization. The advantages of a clothing system are emphasized and various kinds of fabrics considered.

Part 2 discusses in detail the function of clothing in the regulation of body heat, gives experimental data on the physical properties of fabrics, and compares the value of different kinds of clothing for different seasons and under different atmospheric conditions.

Part 3 reports in detail and criticizes the various systems of clothing advocated by different investigators, and gives data on the physical properties of many fabrics developed by these workers.

(200) RUGH, J. T.

1928. PREVENTION OF POSTURAL DEFORMITIES. Arch. Ped. 45: 319-325.

An explanation of certain types of postural deformities and the best ways of remedying them. The physiological result of wearing high heels and the importance of proper clothing for children is mentioned briefly.

(201) RUST, M. A.

1887. MUTILATIONS. Gaillard's Med. Jour. 43: 538-546.

General discussion of shoes, especially with regard to ill-fitting shoes as the cause of various deformities and mutilations.

(202) RUTHERFORD, R. C.

1891. WOOLLEN OR LINEN? Sanitarian 26: [385]-413; 27: [385]-432, illus.

Controversial articles defending the Jaeger system of clothing. Many published statements by physicians and others favoring these woollen garments are quoted.

(203) SAALFELD, E.

1910. HAUTKRANK HEITEN UND MODERNE KLEIDUNG. [Skin diseases and modern clothing.] Med. Klinik 6 (1): 344.

The author discusses the effects of modern clothing on the skin. He points out that improper footwear may produce blisters, callouses, and corns; that whalebone in women's collars may cause irritation and itching; that stiff collars worn by men often cause skin eruption; that high, tight collars cause chloasma; and that an important cause of boils is "die Bartbinde," a device used in Germany for forming the mustache.

(204) SAMPSON, J. A.

1902. PROPER FOOT WEAR AND THE TREATMENT OF WEAKENED AND FLAT FEET BY MECHANICAL DEVICES FOR MAINTAINING THE ADDUCTED POSITION. Bul. Johns Hopkins Hosp. 13: 8-20, illus.; Amer. Med. [Philadelphia] 3: 104-112, illus.

A discussion of the mechanical use and movements of the different parts of the foot and their adjustment to deformities caused by shoes. Stockings often help the deforming process as also do high heels. Suggests treatment of weak feet by means of braces.

(205) SARGENT, D. A.

1910. HYGIENE, DRESS AND DRESS REFORM. Jour. Home Econ. 2: 298-305.

General discussion of clothing from the standpoint of its physiological aspects and its warmth, conductance, and ventilating properties. Poisonous effects of some hose dyes are also included.

(206) SCHACHT, F.

1917. HYGIENISCHE UNTERKLEIDUNG. [Hygienic underclothing.] Ztschr. Phys. u. Diätet. Ther. 21: 108-115.

Summary of 14 of the various "systems" of underwear advocated by such persons as Jaeger, Lahmann, and Jacobi. Advantages and disadvantages of each are discussed fully.

(207) SCHEIMBERG, H.

1919. FLAT FEET AND WEAK FEET. N. Y. Med. Jour. 109: 138-142, illus.

Discussion of flat foot, its occurrence with examples chosen from children and negroes, its causes and treatment. Describes suitable shoes to be used in this condition.

(208) SCHMIDT, F. A.

1920. KLEIDUNG. [Clothing.] (In Selter, H. Grundriss der Hygiene. 1: 166-171. Dresden and Leipzig, Theodor Steinkopff.)

Comprehensive summary of the subject of clothing as then understood, from the standpoint of a physicist. The physical properties of fabrics are discussed as well as the importance in maintaining the heat and ventilation of the body. Clothing reforms are considered and the design and construction of proper shoes discussed in detail.

(209) SCHMIDT, P.

1914. ZUR HYGIENE DER KLEIDUNG. [Hygiene of clothing.] Centbl. Allg. Gsundheitspflege 33: [16]-31.

Detailed discussion of the physical and physiological problems involved in the selection of the proper kind and type of garments including the influence of clothing on the ventilation and heat regulation of the body, as well as the skin, and the influence of color of clothing on the comfort of the wearer. Suitable clothing from the standpoint of climate, season, manner of living, age, and activity is suggested.

(210) SCHOFIELD, A. T.

1888. A DISSERTATION ON DRESS. Leisure Hour [London] 37: 668-672.

Popular article on the relation of clothing to health, advocating wool for outer and underclothing, and pointing out undesirable features of the styles then in vogue for men and women.

- (211) SCHOLL, W. M.
[1920.] THE HUMAN FOOT, ANATOMY, DEFORMITIES, AND TREATMENT. . . 415 p., illus. Chicago, Foot Specialists Publishing Co.
Discusses cause, effect, and treatment of deformities caused by ill-fitting shoes, the history of shoes, and general directions for fitting and care of shoes and hosiery.
- (212) SCOTT, E. L.
1912. THE IMPORTANCE OF PROPER SHOES. THEIR RELATION TO DEFORMITIES OF THE FOOT AND BODY EFFICIENCY. South. Med. Jour. 5: 146-153, illus.
The author considers that the use of improper shoes results in deformity and loss of efficiency. He discusses each motion in the process of taking a step and shows the strain and pressure of the shoe on the foot at such times. He also shows the deforming tendency towards other parts of the body and how this results in loss of efficiency.
- (213) SEARS, E.
1919. WANTED—A SHOE. Ladies' Home Jour. 36 (12): 81-82.
Describes some deformities and ailments caused by ill-fitting shoes and urges the adoption of sensible footwear. Tells of a conference called in New York by the National Board of the Young Women's Christian Association to start a campaign to obtain a normal shoe.
- (214) SECURIUS, W. A.
1882. FALSCH E UND RICHTIGE FORM DER FUSSBEKLEIDUNG. [Right and wrong form of footwear.] Jour. Gsndthspflegr 6 (1): 7-9, 20-21.
Objects to the tyrannies of fashion as applied to dress in general and footwear in particular. Describes and recommends stockings for the right and left foot.
- (215) SERRES, D'ALAIS.
1856. UN MOT SUR LA CONSTRICTION DU COU, OU MALADIE DE LA CRAVATE. [A word on the constriction of the neck, or malady of the neckband.] Bul. G6n. Th6r. M6d. et Chirurg. 50: 123-125.
Article showing that too tight collars not only affect the neck but also cause various other disorders, such as heart trouble, difficult respiration, and general weakness.
- (216) SEWELL, C. W.
[1924.] FOOT EFFICIENCY. . . 32 p., illus. London, The C. W. Daniel Co.
The author discusses tired and weak feet, especially of children, prescribes treatment and exercises, and devotes a section of his book to "commonsense footwear," "high heels," and "hints on footwear and footcare."
- (217) SHERMAN, F. A.
1925. HYGIENE OF CLOTHING. Jour. Home Econ. 17: 20-26.
Discusses relation of clothing to health, with regard to clothing for different ages and for various parts of the body. The effect of improper shoes on the feet is considered at length.
- (218) SLOSSON, E. E.
1927. CONCERNING SANDALS. Sci. News-Letter 12: 169-170.
General discussion giving the use and purpose of shoes and prophesying that the sandal will be the ultimate development in shoes.
- (219) SOLBRIG.
1899. DIE HYGIENE DER KLEIDUNG. [Hygiene of clothing.] Heilkunde 3: 451-454, 529-533.
Clear, concise compilation of data on the esthetic, physical, and cultural aspects of clothing. The author recommends that clothing should be loose and light in weight, should regulate the body temperature, and should protect the head from sunlight. Harmful dyes should be avoided.

- (220) SOUTTER, R.
1906. SHOES AND FEET. *Boston Med. and Surg. Jour.* 154: 40-42, illus. General discussion on fraud in shoe manufacturing and the effect of ill-fitting shoes in causing deformities of the feet.
- (221) SPENER.
1898. ZUR VERBESSERUNG DES SCHUHWERKES. [An improvement on shoes.] *Deut. Med. Wchnschr.* 24: 224.
Discussion of the disadvantages of shoes commonly worn, suggesting that the tops of shoes be made of specially treated canvas perforated so as to ventilate the feet.
- (222) SPIETSCHKA, T., and GRÜNFELD, A.
1896. DIE PELEGE DER HAUT UND IHRER ADNEXA. . . [The care of the skin and its adnexa.] 201 p., illus. Stuttgart, Ferdinand Enke.
The influence of clothing on the condition of the skin is discussed on pages 99 to 108. The authors consider in detail the hygienic properties of clothing, including its mechanical influence on the skin as well as on the body, heat conductivity, heat radiation and absorption, hygroscopic properties, air permeability, and chemical action on the skin.
- (223) STARCKE, P.
1881. DIE MISSSTALTUNG DER FÜSSE DURCH UNZWECKMÄSSIGE BEKLEIDUNG. [Deformity of feet caused by the wrong kind of shoe.] *Samml. Klin. Vorträge No. 194 (Chirurg. No. 59) [1597]-1614.*
Detailed discussion of deformities of the feet caused by shoes that are too short, too narrow, or too pointed. The author recommends a "natural shoe" manufactured in Berlin.
- (224) STIEDA, L.
1903. DR. FAUST-BÜCKEBURG. EIN KLEIDER-REFORMATOR AM ENDE DES XVIII. JAHRHUNDERTS. [Dr. Faust-Bückeburg. A clothing reformer at the end of the eighteenth century.] *Janus [Amsterdam]* 8: [507]-573.
Discussion of Faust-Bückeburg's book entitled "Wie der Geschlechtstrieb des Menschen in Ordnung zu bringen und wie die Menschen besser und glücklicher zu machen." [How to bring the sexual instincts of human beings to order and how to make better and happier human beings.] The author contends that tight trousers are the cause of many of the evils and sufferings appearing later in the man. An extended discussion of the position of the testicles and their possible injury by clothing is included. A description of recommended clothing for children under 15 years of age is given.
- (225) STORY, M.
1924. HOW TO DRESS WELL. . . 478 p., illus. New York and London, Funk & Wagnalls Co.
Scattered references to the effect of clothing on physical and mental health are given throughout the book.
- (226) STRUNSKY, M.
1913. THE "NEW HEEL," WITH A PATHOGNOMONIC SIGN FOR DETECTING INFLAMMATORY LESIONS IN THE ARCH OF THE FOOT. *Jour. Amer. Med. Assoc.* 60: 1152-1153.
The author believes that high heels are largely the cause of "new heel." He describes how these inflammatory lesions in the anterior arch of the foot can be detected, as well as the kind of shoe which aids in treatment and is least painful.
- (227) TALBERT, G. A.
1923. THE ASH OF HUMAN SWEAT PRODUCED BY HEAT AND WORK. *Amer. Jour. Physiol.* 63: 350-357.
Comparison of the ash content of sweat from covered and bare parts of the body shows that there is more ash in sweat from the covered parts than from the corresponding naked parts.

- (228) TALBOTT, M. H.
1916. YOUR POOR FEET. . . . Country Gentleman 81: 610.
General discussion of shoes, maintaining that shoes should fit the foot snugly but not tightly. The author also states that ill-fitting stockings play a big part in deforming the feet.
- (229) TAYLOR, J. M.
1919. THE SIGNIFICANCE OF FOOT TROUBLES AND DEFORMITIES. N. Y. Med. Jour. 110: [701]-706, illus.
Contends that the whole body is distorted and deformed through the effects of misshapen feet and that women require corsets as a result of deformed feet. Gives general discussion of ill-fitting and proper shoes and suggests treatment for deformities.
- (230) TENNEY, B.
1899. WEAK FEET. Jour. Boston Soc. Med. Sci. 3: 235-238.
The writer discusses the factors contributing to weak or flat feet, one of the most important of which is footgear. He describes the shoe he recommends and the method of measuring accurately for it.
- (231) THOMPSON, L.
1926. FITTING THE SHOE TO THE FOOT. Hoard's Dairymen 71: 429.
An example is given to illustrate how seldom shoes really fit the feet. This is followed by suggestions for obtaining a well-fitting shoe and by a description of exercises for strengthening the muscles of the foot and leg.
- (232) TREVES, F.
[1886.] THE INFLUENCE OF CLOTHING ON HEALTH. 112 p., illus. London, Paris [etc.], Cassell & Co. (Ltd.)
A book written by a surgeon and lecturer on anatomy. Clothing for men, women, and infants is discussed with special emphasis on underclothing, tight lacing, shoes, and the physical properties of fabrics.
- (233) TUBBY, A. H.
1912. THE STRUCTURE AND FUNCTIONS OF THE FOOT. Jour. Roy. Army Med. Corps 19: 77-84, illus.
General discussion of deformed feet caused by shoes and observations on the deformities caused by boots that are too narrow, too short, too high heeled, or in general badly shaped.
- (234) TURNER, A.
1918. STUDY OF FABRICS. 206 p., illus. New York and London, D. Appleton & Co.
One chapter gives general advice concerning the selection of healthful garments.
- (235) TYRRELL, J. B.
1914. FOOT TROUBLES AS A FACTOR AFFECTING HUMAN EFFICIENCY. Med. Rec. [New York] 86: 803-804.
The author suggests that modern sidewalks and other hard surfaces have necessitated a change in feet. He advocates artificial supports for the arch of the foot as a means of preventing and treating deformity.
- (236) UNITED STATES TREASURY DEPARTMENT. BUREAU OF THE PUBLIC HEALTH SERVICE.
1920. FLAT FOOT AND OTHER FOOT TROUBLES. U. S. Pub. Health Serv., Keep Well Ser. 12. 16 p., illus.
This article shows the action of the foot in walking, lists the requirements a good shoe should meet, gives exercises which will strengthen the foot, and treatment for some of the most common foot ailments.
- (237) VACHER, F.
1884. THE DRESS OF WOMEN AND CHILDREN. Health Jour. 2: 22-24, illus.
A physician enumerates and describes the garments which he considers advisable for infants, young children, and women. Of historical interest.

- (238) VAN DEUSEN, E. G.

1928. SELECTION AND CARE OF SHOES AND STOCKINGS. Missouri Agr. Col. Ext. Circ. 202, 4 p., illus.

The author emphasizes that all foot defects, other than those which are congenital, are due to poorly fitted shoes and stockings. Directions are given for the fitting of shoes and the selection and care of stockings.

- (239) VAN VORHIS, F. J.

1884. RAIMENT OF WOMEN AND CHILDREN. Louisville Med. News 17: [209]-212.

Popular discussion advocating that the State board of health give instructions on proper clothing. The author states that changes in temperature and exposure produce much of the illness of women and children which might be prevented by proper clothing. Men's clothing is more adequate and is largely responsible for the better general health of men.

- (240) VASOLD, N.

1924. HYGIENE OF FEET. Ill. Univ. Home Econ. Ext. Leaflet 1, 6 p.

The normal foot is described and the effect of improper footwear on the normal foot shown. Daily care of the feet and proper fitting of shoes and hosiery are described in detail.

- (241) VAUGHAN, W.

1792. AN ESSAY, PHILOSOPHICAL AND MEDICAL, CONCERNING MODERN CLOTHING. 114 p. Rochester, W. Gillman.

The purpose of the essay is "to investigate the causes of dress, to prove that the common mode of clothing not only alters the natural form of our bodies, but also produces inability, disease and death; and to propose a clothing suitable to every age, sex, constitution, and country." Discusses the various garments of men, women, and children, and the best fibers from which to make clothing. Stresses the harmful effects of the clothing of the time. Of historical interest.

- (242) VEITCH, F. P., FREY, R. W., and HOLMAN, H. P.

1927. LEATHER SHOES: SELECTION AND CARE. U. S. Dept. Agr. Farmers' Bul. 1523, 21 p., illus.

This bulletin contains a detailed description of the kinds of leather used in uppers and soles of shoes; of shoe construction and how to select shoes; of the effect of shoes on the feet; and of the care of shoes such as oiling, waterproofing, repairing, polishing, and dyeing.

- (243) WALFORD, W. G.

1912. THE EFFECT OF UNSUITABLE NECK CLOTHING ON HEALTH. Brit. Med. Jour. 1912 (v. 1): 886-887.

Attributes many ailments to tight neckbands.

- (244) WARMAN, E. B.

1903. HEALTH INFLUENCED BY UNDERWEAR—WOOL, SILK, COTTON, LINEN; HEALTH INFLUENCED BY INSULATION; HEALTH INFLUENCED BY COLOR; SUNLIGHT AND THE HUMAN BODY; EXERCISE—WHO NEEDS IT? Spaldings Athletic Library 16 (185), 34 p. New York, American Sport Publishing Co.

The convictions of the author are given on the relative healthful qualities of cotton, wool, silk, and linen when used in underwear fabrics. Linen is advocated as being the best.

- (245) WATKINS, J. T.

1911. UNUSUAL MANIFESTATIONS OF DEFECTIVE FEET. Calif. State Jour. Med. 9: 65-66.

Describes the means by which certain defects of the feet may be recognized and reports successful treatment of them by change of shoes.

- (246) ———.

1912. MECHANICAL EFFICIENCY. Calif. State Jour. Med. 10: 27-31, illus.

Popular address dealing chiefly with the mechanics of the body and the importance of good posture. The effect of improper corsets and shoes on posture is stressed. The author believes that the clothing of growing children should not hang from the shoulders.

- (247) WEED, F. W.
1912. A STUDY OF THE FOOT AND FOOTWEAR. *Mil. Surg.* 30: 170-211, illus.
Discussion of the foot and footwear from a historical and physiological point of view. The author explains how foot strain begins and how it may be prevented. The requirements of a hygienic shoe and sock are specified.
- (248) WEINERT.
1924. NORMALSCHUHWERK. [Normal footwear.] *Ztschr. Orthopädische Chirurg.* 45: 129-138, illus.
The major portion of this article deals with orthopedic shoes, but there is some discussion of the evils of modern shoes and the improvements being introduced in American machine-made shoes.
- (249) WHEAT, A. F.
1909. THE FASHIONABLE SHOE AS WORN BY THE HUMAN FOOT SEEN THRU AN X-RAY. *N. H. Med. Soc. Trans.* 1909: [213]-227.
Discusses shape and position of the foot and shows the effect of narrow, tight shoes on feet, knees, pelvis, and spine. Discusses also the advantages of different orthopedic shoes, and shoes for various ages.
- (250) WHITMAN, R.
1897. PRACTICAL REMARKS ON SHOES. *Med. News* 71: 198-201, illus.
This article is a comparison of the shape of the shoemaker's last with the actual shape of the foot. The only standard by which a shoe may be judged is the shape of the undistorted foot.
- (251) WIENER, E.
1926. ZUR HYGIENE DER KLEIDUNG. [Hygiene of clothing.] *Med. Klinik* 22: 753-754.
The work of Friedberger (see 87) and others is summarized and the author's recommendations given for healthful clothing, especially footwear. Suitable clothing for winter and summer is discussed as well as sportswear.
- (252) WILLIAMS, W. M.
1885. THE PHILOSOPHY OF CLOTHING. XIII.—A PEDESTRIAN'S OUTFIT.—TOWEL SHIRTS. *Knowledge* 8: 61-62.
General discussion of hiking clothes with direct application to a voyage made by the author. Considers the "resistance to the passage of heat and the transpiration of aqueous vapor." Advocates huckaback toweling for shirts.
- (253) ———.
1885. THE PHILOSOPHY OF CLOTHING. XVI.—BOOTS AND SHOES. *Knowledge* 8: 194-196.
The structure of the foot is considered briefly. Advocates going barefoot as much as possible and wearing loose, porous shoes or slippers with soft absorbent woolen socks when a foot covering is necessary.
- (254) ———.
1885. THE PHILOSOPHY OF CLOTHING. XVII.—SHOES AND RUNNING. *Knowledge* 8: 242-243.
Describes walking and running shoes recommended by the author.
- (255) ———.
1885. THE PHILOSOPHY OF CLOTHING. HEAD-GEAR AND OLD FASHIONS. *Knowledge* 8: 281-282.
General discussion of the tyranny of fashion. Advocates that, whenever possible, no head covering should be worn. If protection from the sun is needed, only lightweight and porous hats should be used.
- (256) WILSON, H. A.
1902. MECHANICAL VS. NATURAL SHOES. *Amer. Med.* [Philadelphia] 3: 724.
This article is composed of two letters. The first, by an unknown writer, is a circular letter advertising certain shoes for correcting deformities in children's feet. The second, by Doctor Wilson, is in strong opposition to the first.

- (257) WILSON, H. A.—Continued.

1902. MISAPPLIED MECHANICAL SUPPORT TO WEAK ANKLES OF CHILDREN. *Am. Surg.* [Philadelphia] 35: 358-364.

This article which is in general opposition to the use of mechanical supports for children's feet, contends that weak muscles must be used to become strong and that mechanical supports keep them from being used. The article is discussed by G. G. Davis in the same volume on page 284.

- (258) WILSON, S.

1918. BE FAIR TO YOUR FEET. *Illus. World* 29: 418, illus.

General discussion of correct shoes and feet deformities advising army shoes and exercises for strengthening the feet.

- (259) WOLF, S. J.

1799. BEWEIS DASS EINE LEICHTE KLEIDUNG DER GESUNDHEIT VORTHEILHAFT SEY. MIT MEDICINISCH-THEORETISCH-UND PRAKTISCHEN BEMERKUGEN. [Proving that lightweight dress is beneficial to health. With medical, theoretical, and practical remarks.] 59 p. Halle, J. C. Hendel.

Maintains that by wearing lightweight clothing we become hardened to slight weather changes and therefore are physically healthier. Of historical interest.

- (260) WOLPERT, H.

1902. ÜBER DEN EINFLUSS DER BESONNUNG AUF DEN GASWECHSEL DES MENSCHEN. [The influence of insolation on the gas exchange of human beings.] *Arch. Hyg.* 44: [322]-338.

Insolation appears to have no effect on the elimination of carbon dioxide by clothed humans; with a naked subject, the amount was less than in the case of insolation.

- (261) WOODBURY, W. A.

[1915.] THE CARE OF THE FOOT: A PRACTICAL TEXT-BOOK ON CHIROPODY AND GENERAL CARE OF THE FEET. 60 p., illus. New York, G. W. Dillingham Co.

A general discussion of the anatomy and care of the feet and of the history of footwear. The author advises concerning proper shoes and treatment for the deformities caused by improper ones.

- (262) WOOLMAN, M. S.

1926. CLOTHING: CHOICE, CARE COST. Ed. 3, 288 p., illus. Philadelphia and London, J. B. Lippincott Co.

In chapter 7 body temperature, absorption, cleanliness, ventilation, and freedom of body movement are discussed in relation to healthful clothing.

- (263) ———, and MCGOWAN, E. B.

1926. TEXTILES . . . 572 p., illus. New York, The Macmillan Co.

The hygienic importance of clothing and its relation to body heat and absorption are briefly discussed. The importance of wearing clean and loose garments is also stressed.

- (264) WRIGHT, H. M.

1924. WHAT THE SHOE REVEALS ABOUT THE FOOT. . . *Sci. Amer.* 131: 242, illus.

This article shows the effect of a weak or misshapen foot on the shoe. A worn shoe quickly reveals the defects of the foot to the specialist.

- (265) WÜRTEMBERG.

1916. ERLASS DER OBERSCHULBEHÖRDEN BETR. DIE PFLEGE DER FÜSSE. [An order to instruct high school pupils how to care for their feet.] *Veröffentl. K. Gsmdhtsamt.* 40: 131.

Rules are stated for the selection of shoes and care of the feet. An approved method of walking is also given.

- (266) YOST, F. H.

1924. SITTING, STANDING, AND WALKING. *Delineator* 104 (1): 19, 62-63.

General discussion of posture, methods of overcoming incorrect posture, feet and their covering, points to remember when buying shoes, exercises for the feet, and the discomfort caused by improper shoes.

- (267) ZIEGLER.
1882. LES EFFETS DE LA CHAUSSURE VICIEUSE ET LES MOYENS DE LES PREVENIR. [The effects of improper footwear and the means of preventing them.] Congrès Internatl. Hyg. et Demographie Genève 4 (2): 41-56; Rev. Hyg. et Police Sanit. (1882) 4: 783-790.
The author discusses the natural form of the foot, effects of bad shoes, fallen arches, and rational footwear. The congress adopted his recommendations concerning rational footwear after an open discussion on the shape, material, and size of shoes.
- (268) ZIEM.
1886. ZUR FRAGE ÜBER DIE KÜNSTLICHE VERBILDUNG DER FÜSSE. [The question of artificial changes of the feet.] Allg. Med. Cent.-Ztg. 55: 201.
In connection with a discussion of the influence of the wearing of shoes on the shape of the foot, the author brings together data regarding the feet of some little-known races. The natural position and shape of the toes is contrasted with that brought about by shoes.
- (269) ZÜLCH.
1900. UEBER DIE NOTHWENDIGKEIT EINER BESSERN FUSSPFLEGE UND FUSS-BEKLEIDUNG. [The necessity for better foot care and foot clothing.] Ther. Monatsh. 14: 180-187.
A general article, chiefly summarizing the work of the other investigators, on the care of the feet. The author stresses the importance of keeping the feet dry in order that they may be warm and free from offensive odors. He favors the use of a layer of blotting paper in the sole of the shoe to absorb the moisture from the foot.

EFFECT OF GARMENT STYLE ON HEALTH

PHYSIOLOGICAL ASPECTS

CHILDREN'S CLOTHING

- (270) ANONYMOUS.
1901. REFORMEN IN DER KNABEN-BEKLEIDUNG. [Reform in boys' clothing.] Reichs-medizinal Anz. 26: 164-165, illus.
Trousers for the growing boy is the subject chiefly considered. The author emphasizes that they should not fit too tightly and that suspenders should be properly adjusted.
- (271) ———.
1915. CLOTHES AND OTHER THINGS. Pediatrics 27: [309]-311.
An editorial suggesting that children be clothed according to their physical condition and the indoor and outdoor temperatures to which they are subjected. Wool versus cotton underwear is discussed briefly.
- (272) ———.
1924. SCHOOL DRESS. Lancet [London] 207: 892.
Description of a dress designed to hang from the shoulders, adjustable in length, and with a laced box pleat to allow for growth.
- (273) ———.
1927. SYMPTOMS TO WATCH FOR IN NEW-BORN BABIES. Trained Nurse and Hosp. Rev. 78 (1): 58-59.
The theory is advanced that the most common rash occurring on infants is caused by overheating. Soft cool garments, preferably silk, are recommended.
- (274) ABT, I. A.
1923-26. PEDIATRICS. 8 v. Philadelphia and London, W. B. Saunders Co.
Volumes 1, 2, and 6 contain much valuable information on clothing.

- (275) AMERICAN CHILD HEALTH ASSOCIATION.
[1923.] THE RUNABOUTS IN THE HOUSE OF HEALTH. 62 p., illus. New York.
Suggestions are given in regard to the care of children from 2 to 6 years of age. A short discussion of underwear, shoes, and garters is included.
- (276) AMERICAN SCHOOL OF HOME ECONOMICS.
1912. HANDBOOK OF DRESS AND CHILDHOOD. [635] p., illus. Chicago.
Title is misleading. Book consists of three sections: Textiles and clothing, by Kate Heintz Watson, 244 p.; Study of child life, by Marion Foster Washburne, 183 p.; and Care of children, by Alfred Cleveland Cotton, 208 p. Infant's and children's clothing is discussed briefly and rather incidentally in the first and last sections.
- (277) ASSMUS, K.
1903. EIN VORSCHLAG ZU EINER VOLLSTÄNDIGEN REFORM DER ERSTLINGS-BEKLEIDUNG UND-WÄSCHE AUF HYGIENISCHER GRUNDLAGE. [A suggestion for the complete reform in the clothing and bathing of infants on a hygienic basis.] Deut. Med. Wchnschr. 29: 169-172.
Conditions in the poorer homes brought about by unsanitary methods of caring for infants' soiled clothing are described. The harmful effects of these on the health of the child and family and the need for adoption of new practices are stressed. As a result of experimenting with various types of absorbent fabrics and materials, the author recommends the use of pads or bags of peat under the child.
- (278) BAKER, L.
1926. CLOTHING OF CHILDREN IN RELATION TO HEALTH. Jour. Home Econ. 18: 400-401.
Report of a study in which 20 boys and girls from 7 to 11 years of age were weighed with and without their clothing. Garments were also examined for cleanliness, construction, material, and fastenings.
- (279) BAKER, S. J.
1923. THE GROWING CHILD. 230 p., illus. Boston, Little, Brown & Co.
Clothing is discussed briefly on pages 35 to 43.
- (280) ———.
1928. A NEW WAY TO DRESS THE BABY. Ladies' Home Jour. 45 (5): 154, 160, illus.
Description of layette recommended as being convenient, comfortable, and hygienic. The dress and petticoat open all the way down the front and are preferably fastened with tapes, as are also the band and underskirt. In adjusting the garments, they are arranged one inside the other so that the baby need not be turned during dressing.
- (281) ———.
1928. THE YOUNGEST GENERATION. VI. DRESSING FOR HEALTH. Ladies' Home Jour. 45 (3): 182, 187, illus.
An article showing how to dress a baby. Weight of clothing, kinds of material, and designs for the garments are considered from the hygienic standpoint.
- (282) BALDWIN, J. C.
1924. PEDIATRICS FOR NURSES. 261 p., illus. New York and London, D. Appleton & Co.
Layettes are discussed with special attention to diapers.
- (283) BALLIN, A. S.
1883. HOW TO CLOTHE CHILDREN. Health [London] 2: 133-134, 150, 165, illus.
The author urges the necessity of clothing children more warmly than adults and suggests types of garments for all kinds of weather. The clothing should not bind and yet must be close fitting so as to give warmth.

- (284) BALLIN, A. S.—Continued.

1884. A LECTURE ON CHILDREN'S DRESS. The Health Exhibition Literature 12: 147-171. General Hygiene Pt. 3.

Describes and discusses hygienic clothing for infants and children. Insufficient clothing in winter is held to be the cause of many children's ailments. Infants' clothing should cover every part of the body uniformly, rest upon the collar bones so that the arms are free, be made so all garments can be put on and taken off without turning the baby over and be short and light to permit freedom of motion. The poisoning of the skin by dyes used in clothing is also discussed. Much of the material in this volume appears in "The science of dress in theory and practice," see 23.

- (285) BATLEY, M. E.

1920. THE CARE OF CHILDREN'S FEET. . . Ladies' Home Jour. 37 (6): 115.

The author considers correct posture and correct shoes the main factors in the hygiene of the feet. Deformities caused by ill-fitting shoes, high heels, and stockings are enumerated. Shoes may be the cause of children's weak feet but malnutrition is often responsible.

- (286) ———

1921. STRONG FEET MAKE STRONG BODIES. . . Delineator 99 (4): 57, 87, illus.

General discussion of the importance of proper shoes and posture. Cites and gives exercises for correcting deformities caused by incorrect shoes and poor posture.

- (287) BRADY, J. M.

1916. THE CARE OF THE DELICATE INFANT DURING HOT WEATHER. Jour. Missouri State Med. Assoc. 13: 383-385.

The importance of light clothing for infants during hot weather is stressed.

- (288) BRAHDY, M. B.

1927. POSTURE DEFECTS IN CHILDREN. Arch. Ped. 44: 411-423, illus.

Clothing is mentioned as one cause of poor posture. Correct underwaists and garters are described briefly.

- (289) BROWN, A.

1922. CLOTHES FOR CHILDREN. Mother and Child 3: 316-317.

One of a series of health talks for mothers and children. General suggestions are given for comfortable and hygienic garments for children. Outer and underclothing and footwear are considered.

- (290) BROWN, A. G.

1923. THE NORMAL CHILD, ITS CARE AND FEEDING. 254 p., illus. New York and London, The Century Co.

Chapter 3 deals with clothing for the baby and the older child.

- (291) CAMPEELL, M.

1928. DRESSES FOR THE LITTLE GIRL. U. S. Dept. Agr. Leaflet 26, [8] p., illus.

Emphasizes that dresses to be worn by little girls should be simple and comfortable. Suitable dresses for school and play and for special occasions are suggested and illustrated.

- (292) CHADWICK, M.

1929. THE DANGERS OF TIGHT CLOTHING. New Health 4 (1): 31-32.

Condemns the tightness and shortness of present day children's clothing and the use of elastic for holding clothing in place. Short socks and knickers resulting in blue limbs and red noses on wintry days are considered a source of danger. Tight garments, it is stated, may cause acute discomfort, crossness, and lack of appetite, thus having an injurious effect on both body and character.

- (293) CHAMBERS, M. D.

1925. CARE AND TRAINING OF BOYS AND GIRLS. 275 p., illus. Boston, The Boston Cooking-School Magazine Co.

Clothing and its relation to health is discussed briefly as it relates to each of eight age divisions into which the author divides childhood.

- (294) CHLUMSKY, V.
1925. KLEIDER UND KÖRPERFORM. [Clothing and the body form.] Arch. Orthopädische und Unfall-Chirurg. 23: 398-400.
Harmful effects of improper clothing for children are considered. Garments which are too tight across the chest are particularly condemned. The author advocates that most of the weight of the clothing should come on the hip bones rather than on the shoulders or waist.
- (295) CHUBB, E.
1928 THE SELF-HELP BIB. Child Welfare 23: 195-196, illus.
Describes bibs which can be adjusted and removed by young children.
- (296) CLEVELAND, E.
[1925.] TRAINING THE TODDLER. 172 p., illus. Philadelphia, London, [etc.] J. B. Lippincott Co.
Clothing is considered briefly from the standpoint of comfort, convenience of self-help, suitability to season, and freedom from pressure or irritation.
- (297) COFFIN, A.
1858 ON THE HYGIENE OF COSTUME. Charleston Med. Jour. and Rev. 13: 636-640.
The author points out some of the unhealthful aspects of military uniforms worn in boys' schools in South Carolina and suggests specific improvements.
- (298) COHEN, S. A.
1928. INFANTS' CLOTHING. Arch. Ped. 45: 326-333.
A physician discusses the function of clothing from a physiological standpoint. The influence of fiber composition, fabric construction, and color on the hygienic value of different fabrics for various garments is considered in detail. Recommendations are given as to the number and kinds of garments infants should wear at different seasons. Particular emphasis is laid upon the danger of excessive and constrictive clothing.
- (299) COMSTOCK, S.
1915. HYGIENE IN THE BABY'S WARDROBE. Good Housekeeping 60: 55-62, illus.
Many practical suggestions are given for making a baby comfortable.
- (300) ———.
1915. MOTHERCRAFT: THE WAY FEET SHOULD GO. Good Housekeeping 60: 662-668, illus.
General discussion of deformities of the feet of children and adults caused by improper shoes. Suggests methods of treatment and describes proper shoes for children and adults. Mothers are urged to give adequate care to their children's feet by studying the shape and fit of their shoes.
- (301) COOLIDGE, E. L.
1913. HOW TO DRESS THE BABY. Ladies' Home Jour. 30 (5): 66.
Description of the "short" clothing considered necessary for an infant at that time.
- (302) ———.
1918. THE SCHOOL-CHILD'S FEET. Ladies' Home Jour. 35 (9): 80.
The author stresses the importance of proper shoes and describes deformities caused by ill-fitting ones. The advisability of wearing rubbers in wet weather but removing them indoors is also emphasized.
- (303) COTTON, A. C.
1903. THE EFFECTS OF TIGHT DIAPERS. Arch. Ped. 20: 88-94, illus.; Amer. Ped. Soc. Trans. (1902) 14: [174]-180, illus.
General discussion of the effects of tight diapers; well illustrated by X-ray photographs of infants with constricted pelvis due to wearing these garments.

- (304) CRAWFORD, S.
1922. NAPPIN ERUPTION OF JACQUET. Penn. Med. Jour. 26: 165-173, illus.
The etiology, histopathology, diagnosis, and treatment of an eruption that occurs only in the diaper region. It was first accurately described by Jacquet. The author emphasizes the effect of rubber pants and improperly laundered diapers in producing this condition.
- (305) CURTIS, H. S.
1922. ATHLETICS AND THE CHILDREN'S CLOTHES. Amer. Phys. Ed. Rev. 27: 224-227.
Discusses the harmful effects of tight, uncomfortable, and excessive clothing on children. Describes suitable clothing for small children and boy and girl athletes.
- (306) CUTLER, B. I.
1923. PEDIATRIC NURSING, ITS PRINCIPLES AND PRACTICE. 478 p., illus. New York, The Macmillan Company.
Discussion of the layette.
- (307) DARBY, J. C.
1844. REMARKS ON THE USE OF FLANNEL FOR CHILDREN'S SUMMER CLOTHING. West. Lancet [Cincinnati] 3: 60-64.
The author suggests that the fashion of dressing children in flannel shirts and of leaving their arms and legs bare are some of the causes for "summer complaint." Advises cotton for summer wear and recommends a "slip" with long sleeves and close-fitting neck as the best type of garment.
- (308) DAVIS, M. A.
1927. CHILDREN'S ROMPERS. U. S. Dept. Agr. Leaflet 11, [8] p., illus.
Describes various types of rompers for the infant and pre-school child emphasizing those points in design which assist in child training and make for comfort, ease of laundering, and convenience.
- (309) ———.
1927. HOW TO DRESS FOR A SUN BATH. Children 2 (8) : 30, illus.
Simple cotton suits are described and suggested for well children taking sun baths.
- (310) DODSON, E.
1926. CHILDREN'S CLOTHING. Calif. Agr. Col. Ext. Serv. H[ome] D[emon.] 227, [6] p., illus. (Reprinted as N. Y. Agr. Col. (Cornell) Ext. Bul. 150, 17 p., illus.)
Circular intended for distribution at children's clothing demonstrations. Discusses the most important points to consider in selecting and making children's garments.
- (311) DUTCHER, A. P.
1863. ANIMAL HEAT, CLOTHING; THEIR IMPORTANCE IN PREVENTING THE FORMATION OF THE TUBERCULAR DIATHESIS AND OTHER DISORDERS. Cincinnati Lancet and Observer 6: 288-296.
The importance of retaining the heat of the body is emphasized. Flannel is recommended as the most appropriate material for children's clothing. Dresses should have long sleeves and high neck lines. Many diseases of infancy are caused by undue exposure of the arms.
- (312) EARNSHAW, G. F.
1926. A CHILD IS TO BE BORN. IV. PLANNING THE LAYETTE. Hygeia [Chicago] 4: 445-447, illus.
Lists and describes necessary garments for a layette.
- (313) ELDER, M. B.
1927. CLOTHES FOR LITTLE FOLKS. Iowa Agr. Col. Ext. Serv., Home Econ. Bul. 113, 16 p., illus.
The relation of clothing to health and behavior are among the subjects included in this pamphlet.

- (314) ELDER, M. B.—Continued.

1927. BABY CLOTHES. Iowa Agr. Col. Ext. Serv., Home Econ. Bul. 114, 8 p., illus.

Healthful aspects of clothing are considered incidentally in this bulletin, which lists the items necessary in a layette and discusses the construction and care of infants' clothing.

- (315) ———.

1928. BETTER BABY CLOTHES . . . Ladies' Home Jour. 45 (1): 20, 61, illus.

Lists the garments necessary for a layette, suggests suitable materials, and gives the measurements for each garment. Emphasizes the necessity of providing comfortable and hygienic clothing for the baby.

- (316) ELWELL, G. B.

1919. THE SELECTION OF CLOTHING FOR CHILDREN. Idaho Agr. Col. Ext. Bul. 27, 13 p., illus.

Hygienic, economic, artistic, and ethical aspects of children's clothing are discussed from a practical point of view.

- (317) FABER, H. K.

1925. DRESSING YOUR CHILDREN FOR HEALTH. (In Shaw, H. L. K. ed. The Happy Child, p. 60-71. New York, Dodd, Mead & Co.)

Emphasizes the fact that children's clothing should be soft, absorbent, capable of efficient cleansing, light in weight, reasonably loose, and adjusted to the temperature of the surrounding air.

- (318) ——— and HADDEN, F.

1926. PROPERTIES OF SOME FABRICS USED FOR INFANTS' UNDERWEAR. Arch. Ped. 43: 283-291.

Report of experimental data on the heat conductance and behavior toward water, of certain linen, silk, wool, and cotton undershirt fabrics and bird's-eye and canton flannel diaper materials. The efficiency with which bacteria could be removed from these fabrics by washing was also studied. From the results obtained, knit cotton for babies' undershirts and bird's-eye rather than canton flannel for diapers are recommended.

- (319) FAWCETT, H. A.

1924. CLOTHING: ITS GENERAL RELATION TO THE HEALTH OF THE CHILD. Med. Officer 31: 239-241.

A school medical inspector discusses the hygienic aspects of children's clothing in the light of his observation of school children. Physical ills caused by excessive weight, constriction, and uneven distribution of clothing are considered. Shoes are discussed in detail, and the need for cleanliness of all clothing is emphasized. Overexposure of the legs of children is condemned.

- (320) FISCHER, L.

1919. THE HEALTH-CARE OF THE GROWING CHILD. Ed. 2, rev., 341 p., illus. New York and London, Funk & Wagnalls Co.

Contains a few paragraphs relating chiefly to the harmful effects of excessive clothing.

- (321) FLETCHER, W. B.

1866. AN APPEAL FOR A MORE HUMANE DRESSING OF NEW-BORN INFANTS. Cincinnati Lancet and Observer 9: 408-410.

Discussion of the bad effects of binders. Recommends a caplike bandage for the cord and no binder.

- (322) FOVILLE, A.

1834. INFLUENCE DES VÊTEMENTS SUR NOS ORGANES. DÉFORMATION DU CRÂNE RÉSULTANT DE LA MÉTHODE LA PLUS GÉNÉRALE DE COUVRIR LA TÊTE DES ENFANS. [Influence of clothing on our organs. Deformation of the skull resulting from the method generally used to cover the head of children.] 69 p., illus. Paris, De Just Rouvier et C. Le Rouvier.

A study of skulls which shows the effect of tight ribbons, hats, and bands on the shape of the head.

- (323) FREEMAN, R. D.
1915. THE MANAGEMENT OF CHILDREN BETWEEN ONE AND TWO YEARS OF AGE. Arch. Ped. 32: 266-271.
The author contends that the less clothing a child is accustomed to wear, the fewer colds it will contract and the more automatic will be the heat regulation of the skin. Porous linen is recommended.
- (324) GARD, N.
1924. CLOTHING THE BABY. Ky. Agr. Col. Ext. Circ. 166, 15 p., illus.
Gives practical suggestions for clothing a baby so as to keep him comfortable and healthy.
- (325) GRIFFITH, J. P. C.
1895. REMARKS ON THE HYGIENE OF CHILDREN,—FEEDING, SHOES, MEASUREMENT OF LENGTH. Univ. Med. Mag. 7: 449-455, illus.
Points out that babies' feet are not shapeless but have the same general form as those of adults; therefore the earliest shoes should be shaped for the right and the left foot.
- (326) ———.
1917. WEIGHT OF CLOTHING AND ITS RELATION TO WEIGHT OF THE CHILD IN THE FIRST FIVE YEARS OF LIFE. N. Y. Med. Jour. 106: 823-825.
Includes experimental results and discusses literature on the weight of children's clothing.
- (327) GROSSMAN, J.
1922. THE CARE OF THE FOOT DURING CHILDHOOD. Nation's Health 4: 338-342, illus.
A composite of three previous papers with additional information based on recent investigations. The feet of children should be examined regularly. Exercises are recommended for congenitally weak feet.
- (328) HALSEY, L. W.
1906. SOME OBSERVATIONS ON THE CARE AND TREATMENT OF INFANTS AND YOUNG CHILDREN. Jour. N. J. Med. Soc. 2: 376-379.
Includes a short paragraph describing the garments which the author considers should be worn by young infants during the "long-clothes" period.
- (329) HAMILTON, B. W.
1913. BABY'S BIB AND TUCKER. Delineator 82: 439, 493, illus.
Outlines requirements of each article in a layette.
- (330) HARSTON, G. M.
1912. THE CARE AND TREATMENT OF EUROPEAN CHILDREN IN THE TROPICS. 232 p., illus. London, Baillière, Tindall & Cox.
Contains scattered notes on clothing.
- (331) HELMHOLZ, H. F.
1914. THE RELATION OF HEAT TO THE MORBIDITY AND MORTALITY OF INFANTS FROM GASTRO-INTESTINAL DISEASES. Jour. Amer. Med. Assoc. 63: 1371-1374.
Scattered references in this article suggest that too much clothing was worn in most of the cases of gastro-intestinal disease studied.
- (332) HINTRÄGER, K.
1896. ÜBER KLEIDERABLAGEN IN SCHULEN. [Clothes storage in schools.] Ztschr. Schulgesundheitspflege 9: [633]-643, illus.
Deplores the unhygienic practice of hanging children's wraps in the schoolroom. Describes and gives diagrams showing how cloakrooms can be arranged adjacent to classrooms.
- (333) HOLT, L. E., and LOWLAND, J.
1923. THE DISEASES OF INFANCY AND CHILDHOOD. Ed. 8, rev., 1127 p. New York and London, D. Appleton & Co.
Includes a section recommending desirable types of garments and fabrics to be worn by infants and children.

- (334) HUENEKENS, E. J.
1923. CARE OF THE NEW-BORN IN THE FIRST WEEKS OF LIFE. *Jour. Amer. Med. Assoc.* 81: 624-627.
Stresses the need of correct clothing for young infants.
- (335) HUTCHINSON, W.
1912. THE COCOON OF THE CHILD. *Good Housekeeping* 54: 818-824, illus.
Popular article deploring the tendency to overdress infants. Gives general suggestions regarding suitable clothing for infants and children and advocates cotton as the best underwear material.
- (336) HYDE, B. E.
1924. BABY BUNTING'S CLOTHING BUDGET. *Colo. Agr. Col. Ext. Bul.* 214A, 15 p., illus.
A layette is listed and diagrams for cutting patterns are illustrated and described. Discusses suitable materials and gives detailed instructions for constructing and finishing each garment.
- (337) KEITHLINE, M.
1926. CLOTHES FOR TOTS. *S. Dak. Agr. Col. Ext. Circ.* 234, 8 p., illus.
Simple designs for various children's garments are discussed and illustrated. Suggestions are given for selecting and altering patterns and choosing suitable fabrics. A table giving appropriate colors for different types of children is included.
- (338) KELLOGG, E. E.
1901. CLOTHING FOR CHILDREN. *Good Health* 36: 16-18.
General suggestions given in popular form. Recommends roomy, warm, and becoming clothing.
- (339) KELLOGG, J. H.
1901. RATIONELLE KINDERKLEIDUNG. [Rational clothing for children.] *Hygieia* [Stuttgart] 14: 342-345.
General discussion of children's clothing from the standpoint of its effect on the health and comfort of the child.
- (340) KENYON, J. H.
1926. A SURE FOOTING. *Good Housekeeping* 83 (1): 100.
A letter of advice to mothers in which shoes are discussed incidentally in connection with proper walking habits and exercises which will benefit growing feet.
- (341) ———.
1927. CLOTHING FOR THE SUMMER BABY. *Good Housekeeping* 85 (1): 98.
Practical advice concerning the composition and construction of clothing for infants during hot weather.
- (342) KERLEY, C. G., and GRAVES, G. W.
[c 1924.] THE PRACTICE OF PEDIATRICS. Ed. 3, rev., 922 p., illus. Philadelphia and London, W. B. Saunders Co.
Clothing is considered very briefly. The author states that thin undernourished children require more clothing than the physically normal. The feet and legs of every child should be warm to the touch. The feeling of the upper extremities is not as good an index of warmth.
- (343) KOBRAK, E.
1906. UEBER KLEIDUNGS-UND AUSTRÜSTUNGS-GEGENSTÄNDE FÜR DEN SÄUGLING. [Clothing and equipment for the baby.] *Deut. Krankenpflege Ztg.* 9: 109-112, illus.
Gives a detailed description of the clothing for a newborn baby. Chiefly of historical interest.
- (344) LAFETRA, L. E.
1917. RELATION OF CLOTHING TO POSTURE. *Amer. Posture League and Amer. School Hygiene Assoc. Proc.* . . . July 5, 1917: 24-28, illus.
Describes an underwaist, hose supporter, and boy's coat that will not produce postural defects.

- (345) LANGNECKER, H. L.
1926. THE IMPORTANCE OF POSTURAL GUIDANCE IN THE VERY YOUNG CHILD. Ed. 2, 11 p., illus. Sacramento, Calif., State Bd. Health.
A small portion of this paper is devoted to a discussion of the deforming tendency of improper clothing for children, especially underwaists and shoes.
- (346) LEIBY, C. I.
1921. BABY'S CLOTHES. Iowa Agr. Col. Ext. Serv., Home Econ. Bul. 29, 7 p., illus. (Reprinted, 1924.)
A minimum layette is listed; designs and measurements for each garment are given, together with suggestions for outfitting the baby's bed and for laundering infants' clothing.
- (347) ———.
1922. CLOTHES FOR LITTLE FOLKS. Iowa Agr. Col. Ext. Serv., Home Econ. Bul. 39, 11 p., illus. (Reprinted, 1923.)
Practical suggestions for making and selecting comfortable clothing for children.
- (348) LEWI, M. J.
1921. FOOT DEFECTIVENESS IN SCHOOL CHILDREN. Pub. Health Rpts. [U. S.] 36: 2725-2727.
Report of the examination of the feet and footwear of the children of a New York City public school. The defects noted are tabulated.
- (349) LEWIN, P.
1926. FLAT FOOT IN INFANTS AND CHILDREN. Amer. Jour. Diseases Children 31: [704]-718, illus.
The author discusses flat foot, both congenital and acquired, among children. Proper footwear and exercises for eliminating this condition are described.
- (350) LIEFMANN, H., and LINDEMANN, A.
1911. DER EINFLUSS DER HITZE AUF DIE STERBLICHKEIT DER SÄUGLINGS IN BERLIN UND EINIGEN ANDEREN GROSSSTÄDTEN. [Influence of heat on the mortality of infants in Berlin and some other large cities.] 74 p., illus. Braunschweig, Friedr. Vieweg & Sohn.
The death rate in Berlin and other large cities is considered from a statistical and clinical standpoint. The authors conclude that the summer heat is to some extent a direct cause of the death of infants and give suggestions concerning their care during that season. Recommendations in regard to clothing and bedding are included.
- (351) LUCAS, W. P.
1924. THE HEALTH OF THE RUNABOUT CHILD. 229 p., illus. New York, The Macmillan Co.
A few paragraphs are devoted to the hygienic aspects of children's clothing.
- (352) MCCOMBS, R. S.
1925. DISEASES OF CHILDREN, FOR NURSES; INCLUDING PEDIATRIC NURSING, INFANT FEEDING, THERAPEUTIC MEASURES EMPLOYED IN CHILDHOOD, TREATMENT FOR EMERGENCIES, PROPHYLAXIS AND HYGIENE. Ed. 5, 581 p., illus. Philadelphia and London, W. B. Saunders Co.
Briefly describes clothing for the newborn and older child. Gives detailed instructions for adjusting the triangular diaper.
- (353) MACMURCHY, H.
1927. THE CANADIAN MOTHER'S BOOK. Canada Dept. Health, Little Blue Books, Mother's Ser. 1 (Pub. 2), 163 p., illus.
Lists and describes a layette; gives practical information regarding suitable clothing for infants and convenient methods of handling the infant while being dressed; includes instructions for making a knitted outfit suggested by the Association of Infant Welfare and Maternity Centres, London.
- (354) ———.
1927. HOW TO TAKE CARE OF THE CHILDREN. Canada Dept. Health, Little Blue Books, Mother's Ser. (Pub. 5), 40 p., illus.
Such subjects as girls' clothes, boys' clothes, stockings, shoes, and underclothing are discussed briefly with emphasis on the relation of clothing to health.

- (355) MENDENHALL, D. R.
1923. CLOTHING THE BABY. Wis. Agr. Col. Ext. Circ. 160, 8 p., illus.
Discusses the selection, making, and laundering of clothing for the child under one year of age.
- (356) MIDDLETON, W. D.
1884. THE SUMMER CLOTHING OF INFANTS. Iowa State Med. Rprtr. 2: 5-10.
Describes infants' summer clothing of that period, advocates cotton undergarments, and warns against overdressing.
- (357) MURRAY, G. P.
1905. THE RIGHTS OF THE CHILD. Delineator 66: 845-[849], illus.
Describes in detail clothes worn by children up to ten years and gives an excellent idea of clothing practices of that period.
- (358) NEWCOMB, M. J.
1916. CHILDREN'S CLOTHING. Penn. State Col. Ext. Circ. 48, 20 p., illus.
General discussion of the hygienic and economic requirements of children's clothing, together with illustrations of groups of recommended garments.
- (359) NORRIS, M. W.
1899. THE CLOTHING OF THE CHILD FOR HEALTH, COMFORT, AND BEAUTY. Homeopathic Jour. Obstet. 21: 146-158.
Emphasizes the value of simple and comfortable clothing for children and makes specific recommendations for certain types of garments. Opposes the extensive use of wool clothing.
- (360) NUNN, T. W.
1894. GROWING CHILDREN AND AWKWARD WALKING. 106 p., London, Kegan Paul, Trench, Trübner & Co. (Ltd.)
General discussion on growth followed by a detailed consideration of the mechanism of walking and the causes, correction, and prevention of awkward walking. The short chapter on clothing deals chiefly with shoes. The author advocates that the difference in length of the collar bones of males and females should be considered in putting the weight of the clothing on the shoulders of children and contends that weight put on the extremity of the collar bone of the male helps rather than hinders respiration while weight on the shoulders of the female tends to compress the upper ribs and impede the inspiratory effort.
- (361) OBER, G.
1912-13. CLOTHING THE CHILDREN. Home Prog. 2 (3): [27]-28, (4) [52]-53, (5) [33]-35, (6) [38]-39, (7) [37]-38, (8) [40]-42, (9) [25]-27, (10) [29]-30, (11) [41], illus.
Series of articles on children's clothing which stress the value of healthful garments and suggest practical designs. Play suits, overalls, night clothing, and footwear are some of the subjects considered.
- (362) O'BRIEN, R.
1928. SUN SUITS FOR CHILDREN. U. S. Dept. Agr. Leaflet 24 [8] p., illus.
Abbreviated garments with and without transparent waists are described and recommended as suitable and modest play suits for well children taking sun baths.
- (363) OGILVY, C.
1921. A STUDY OF THE FOOT IN INFANCY AND CHILDHOOD, WITH SPECIAL REFERENCE TO PREVENTION AND TREATMENT OF DEFORMITY. Arch. Ped. 38: 275-284, illus.
General discussion of deformities in children's feet and description of proper shoes for children of all ages.
- (364) OKLAHOMA AGRICULTURAL COLLEGE. EXTENSION DIVISION.
[n. d.] CLOTHING FOR CHILDREN. Okla. Agr. Col. Ext. Circ. (gen. ser. 37) 201, 7 p.
Discusses the hygienic, economic, and artistic aspects of children's clothing. The number of garments needed in a layette and brief suggestions for making them are included.

- (365) OPPENHEIMER, E.
1922. CLOTHING FOR YOUNG BABIES. *Mother and Child* 3: 364-365.
Short description of a suggested layette with general recommendations as to appropriate materials and designs for each garment.
- (366) OWEN, G.
1923. NURSERY SCHOOL EDUCATION. 176 p., illus. London, Methuen & Co.
One page is devoted to a discussion of children's clothing from the nursery-school point of view.
- (367) PARSONS, F. S.
1891. INFANT DRESS. *Jour. Amer. Med. Assoc.* 17: 554-556, illus.
Short discussion of the harmful effects of binders and all tight, excessive clothing on infants. A garment consisting of shirt and drawers with feet is recommended as an adequate and comfortable undergarment.
- (368) PATTERSON, M. F.
1918. CLOTHES FOR CALIFORNIA CHILDREN. *Calif. State Bd. Health Bul.* 4, 11 p., illus. (Reprinted, 1925.)
Outfits for infants, for children of kindergarten age, and for school children under 10 years are listed. Recommended garment designs are illustrated and the reasons for their choice explained.
- (369) PERRY, C.
1911. MISTAKES WE MAKE IN DRESSING OUR CHILDREN. *Ladies' Home Jour.* 28 (2): 37.
General discussion of the hygienic aspects of clothing as applied to children's garments. Design, fabric composition, and color are considered.
- (370) PRITCHARD, E.
1905. THE HARDENING OF CHILDREN. *Nursing Times* 1: 609-611.
Recommends gradual exposure as a means of improving health.
- (371) RAMSEY, W. R.
1916. INFANCY AND CHILDHOOD. . . 198 p., illus. New York, E. P. Dutton & Co.
The short discussion on clothing the newborn includes recommendations for a layette and brief statements concerning the effect of tight clothing and the relation of clothing to temperature. A few short paragraphs on clothing for older children are given in the latter part of the book.
- (372) ———.
[c1923.] CARE AND FEEDING OF INFANTS AND CHILDREN. . . . Ed. 3, rev. 290 p., illus. Philadelphia and London, J. B. Lippincott Co.
The one chapter on clothing for infants covers such subjects as tight clothing, undergarments, shoes, and excessive and insufficient clothing and gives a suggested layette.
- (373) ———.
1925. ARE YOUR CHILDREN HEALTHY? *Farmer's Wife* 28: 222, illus.
A physician gives general suggestions for the clothing of infants and children chiefly from the standpoint of heat regulation.
- (374) ———.
1928. SPARE THE CLOTHES AND SAVE THE CHILD. *Farmer's Wife* 31 (1): 28, 33, illus.
The fact is stressed that homes are now more evenly and better heated than formerly and, therefore, children should be dressed more lightly when indoors. Heavy wraps should be provided for outdoor wear. Advocates that the minimum amount of clothing for comfort should always be worn.
- (375) RENE, J. A.
1897. HYGIENE OF CHILDHOOD: CLOTHING. *Ann. Hyg.* 12: 77-79.
Short popular discussion of children's clothing. Describes the common textile fibers and stresses the danger of excessive and tight clothing. Night garments and underwear are discussed briefly.

- (376) RICHARDSON, F. H.
1926. SIMPLIFYING PEDIATRIC CARE. *Trained Nurse and Hosp. Rev.* 77: [262]-264.
The author advocates that the abdominal binder be used only as long as necessary to retain the umbilical stump dressing, and that the sleeveless shirt, commonly called a band, be eliminated. A baby's clothing in summer should consist of a cotton shirt, dress, and diaper. In winter a flannel petticoat and sweaters or sacks may be added as necessary. The triangular-shaped diaper is preferred.
- (377) RIETSCHEL, H.
1924. WIE WIRKT DIE HITZE IM SOMMER AUF DIE GESUNDHEIT DES SÄUGLINGS SCHÄDLICH? [How does the summer heat act injuriously upon the health of infants?] *Med. Klinik* 20: [957]-960. (Abstract in *Jour. Amer. Med. Assoc.* 83: 651.)
The overdressing of infants in hot weather is one of the reasons given for summer disorders.
- (378) ST. JOHN, E. C.
1926. NON-RUPTURE BABY BAND. *Trained Nurse and Hosp. Rev.* 77: 261, illus.
Advocates a band shaped with darts instead of the usual unshaped one.
- (379) SAUER, L. W.
1919. CLOTHING OF INFANTS IN SUMMER AND WINTER. *Amer. Jour. Diseases Children* 18: [20]-24.
Reports the weight of clothing worn by 400 infants from 1 to 2 years of age on 200 hot days and 200 cold days.
- (380) _____
1926. NURSERY GUIDE FOR MOTHERS AND CHILDREN'S NURSES. Ed. 2, rev. and enl., 206 p., illus. St. Louis, C. V. Mosby Co.
Includes a discussion of the layette.
- (381) SCHMID-MONNARD.
1901. UEBER DEN WERTH VON KÖRPERMASSEN ZUR BEURTHEILUNG DES KÖRPERZUSTANDES BEI KINDERN. [The significance of body mass for determining the physical condition of children.] *Jahrb. Kinderheilk*, 53: [50]-58, illus.
Reports a study in which the clothing of the children was weighed as an incidental part of the procedure.
- (382) SELL, I. I.
1927. A STUDY OF THE STRUCTURAL DESIGN OF THE CLOTHING OF PRE-SCHOOL CHILDREN IN RELATION TO SELF-CARE. 70 p., illus. Minneapolis. (Thesis, Minn. Univ.)
Reports an analysis of answers to questionnaires sent to mothers in an effort to discover the points in the structural design of children's clothing which are desirable from the standpoint of hygienic value and ease of self-dressing.
- (383) SILVERBERG, M.
1927. MODERN TREND IN CHILDREN'S CLOTHING. *Jour. Amer. Med. Assoc.* 88: 1099.
Communication from a manufacturer of infants' and children's clothing comparing neck measures and lengths of infants' dresses made in 1927 and 15 years previous.
- (384) SKIDMORE, R.
1919. CLOTHING FOR CHILDREN. *Utah Agr. Col. Ext. Circ.* v. 7, no. 8, [4] p.
This leaflet discusses hygienic clothing for children with particular attention to the fabrics that should be used.
- (385) SMITH, E. N.
1899. GROWING CHILDREN, THEIR CLOTHES AND DEFORMITY. 23 p. London, Smith, Elder & Co.
The influence of improper clothing on the growing body is emphasized. Recommends that the weight of the clothing be distributed so as to leave the chest and arms as free as possible and that the garments hang from the waist rather than from the shoulders.

- (386) STOKES, J. M.
1896. THE NEW-BORN BABE. THE BANDAGES—ITS NUISANCE AND MY REASONS, I THINK SUBSTANTIATED. *Med. Mirror* 7: 370-372.
The author attributes many cases of hernia, sore navels, and poor lung development to binders.
- (387) SUTTON, L. P.
1925. IMPORTANCE OF CONSIDERING THE BODY MECHANICS OF CHILDREN. *Amer. Jour. Diseases Children* 30: [550]-557, illus.
A discussion of the physiological effects and treatment of bad posture, including a few statements regarding types of mattresses, underwaists, bloomers, and garters, which help bring about this condition.
- (388) SYNGE, M. B.
1914. SIMPLE GARMENTS FOR CHILDREN. 47 p., illus. London and New York, Longmans, Green & Co.
Contains detailed instructions for selecting the material and cutting and making garments for children from 4 to 14 years of age. The paper patterns designed by D. Payne and furnished with each volume are for garments of the styles prevailing in England in 1914.
- (389) ————
1914. SIMPLE GARMENTS FOR INFANTS. 49 p., illus. London, New York [etc.], Longmans, Green & Co.
Description of the material necessary for children's garments and detailed instructions for cutting and making of all garments needed by an infant and child under 4 years. The accompanying paper patterns from designs by D. Payne are in line with the generally accepted ideas of garments for young children of to-day.
- (390) TRETTIEN, A. W.
1900. CREEPING AND WALKING. *Amer. Jour. Psychol.* 12: [1]-57.
Long skirts for infants are mentioned as a hindrance to their movements and consequently to their development.
- (391) UNITED STATES TREASURY DEPARTMENT. BUREAU OF THE PUBLIC HEALTH SERVICE.
1925. A FURTHER REPORT ON FOOT DEFECTIVENESS IN SCHOOL CHILDREN. *Pub. Health Rpts. [U. S.]* 40: 605-609.
Short discussion of the literature on postural defects of school children with particular emphasis on the relation of these to foot defectiveness. Includes data collected in a foot survey of the pupils of the Bryant High School, Long Island City, N. Y., and reported by M. J. Lewi. (See 348.)
- (392) VESTAL, M.
1927. CLOTHING THE BABY IN THE TROPICS. Porto Rico Univ., Home Econ. Bul. 2 (Whole No. 3), 28 p., illus.
Lists layettes recommended respectively by the Porto Rico chapter of the American Red Cross, the Presbyterian Hospital at San Juan, Porto Rico, and the author. A fourth layette is compiled on the basis of the answers to a questionnaire on the subject received from 700 mothers living on the island. A table is included showing the comparative cost of garments made at home and bought ready-made.
- (393) VISANSKA, S. A.
1915. THE BETTER WAY OF PUTTING A DIAPER ON A BABY. *Pediatrics* 27: 333-338.
A T-shaped diaper is advocated.
- (394) ————
1921. A NEW NAVEL BAND AND BETTER WAY OF PUTTING A DIAPER ON A BABY. *Jour. Med. Assoc. Ga.* 10: 429-432.
The author suggests a new way of putting a diaper on an infant and advocates an elastic binder of stockinet instead of the navel band generally used. Several examples are given of the ill effects of the tight band and triangularly folded diaper. Comparisons are also drawn between the pelvic deformities and mode of dress of Indian and white women.

- (395) WALLER, J. O.
1889. MENTAL AND PHYSICAL TRAINING OF CHILDREN. Pop. Sci. Mo. 36: 213-222.
Popular article which includes a short discussion on clothing. Stresses the dangers of dressing children too lightly.
- (396) WARING, A.
1908. THE DANGERS AND EVIL EFFECTS OF INFANT BINDERS. Brit. Med. Jour. 1908 (v. 1): 1410-1411.
Reports that many cases of vomiting, hernia, and thoracic deformity are due to binders.
- (397) WERNICKE, E.
1922. BEKLEIDUNG DES KLEINKINDES UND DES ÄLTEREN KINDES UNTER BERÜCKSICHTIGUNG AUSGEDEHNTER FREILUFTBEHANDLUNG. [Clothing of infants and older children with reference to open-air treatment.] Ztschr. Säuglings u. Kleinkinderschutz 14: 101-104, illus.
Describes in detail and illustrates the winter and the summer garments used for infants and runabout children being given open-air treatment in a children's hospital in Berlin. Most of the suits are 1-piece.
- (398) WEST, M.
1921. PRENATAL CARE. U. S. Dept. Labor, Children's Bur. Pub. 4, Ed. 4, 41 p.
Discusses maternity wardrobe and layette.
- (399) ———.
1922. CHILD CARE—THE PRESCHOOL AGE. U. S. Dept. Labor, Children's Bur. Pub. 30, 88 p., illus.
Rather detailed descriptions are given of all articles of clothing needed to insure the protection and complete freedom of movement of preschool children.
- (400) ———.
1926. INFANT CARE. U. S. Dept. Labor, Children's Bur. Pub. 8, new ed., rev., 118 p., illus.
Includes a discussion of infants' clothing.
- (401) WHEELER, M.
1910. WINTER CLOTHING FOR CHILDREN. Harper's Bazar 44: 186.
Stresses the importance of quality, distribution, and texture of clothing.
- (402) ZAHORSKY, J.
1898. THERMIC FEVER IN INFANTS. Pediatrics 5: [143]-158.
The influence of clothing is briefly considered.
- (403) ZILLESSEN, O.
1906. EIN NEUER VORSCHLAG IN DER HYGIENE DER SÄUGLINGSBEKLEIDUNG. [A new advance in the hygiene of infants' clothing.] Berlin Klin. Wehnschr. Jahrg. 43: 1205-1206.
Describes recommended infants' garments. Stresses the use of a diaper pad filled with sphagnum moss, which can be destroyed when soiled. Discusses suggestions of Assmus (see 277).
- MEN'S CLOTHING
- (404) ANONYMOUS.
1882-83. DER FUSS, SEINE LEIDEN UND SEINE BEKLEIDUNG. EIN VORTRAG FÜR OFFIZIERE. [The foot, its ailment and its clothing. A discourse for officers.] Militärarzt [Wien] 16: 148-150. 1882. 17: 123-126, 131-133, 187-190. 1883. (Sup. to Wiener Med. Wehnschr.)
Description and discussion of various footwear customs in the armies of different nations. The author considers the conditions in the Austrian Army unsatisfactory and recommends improvements.
- (405) ———.
1898. DRESS IN HOT WEATHER. Brit. Med. Jour. 1898 (v. 2): 493-494.
Popular article recommending wool clothing instead of cotton as being more suitable for the variable English climate. Advises men to wear flannel shirts in summer.

(406) ANONYMOUS.—Continued.

1907. THE OVERCOAT. *Lancet* [London] 173: 1036; *Sci. Amer.* 97: 376.

Popular article stressing the importance of hygienic considerations in the selection of overcoats. Advocates light-weight fabrics of light colors.

(407) ———.

1910. DER "FUSSSCHÖNER," EIN HILFSMITTEL ZUR ERHÖHUNG DER MÄRSCHLEISTUNGEN. [The "Fussschöner," a help on the march.] *Deut. Militärärztl. Ztschr.* 39: 336-337, illus.

Recommends the use of a strap arrangement which passes around the instep and the heel of the boot in order to prevent the foot from slipping about inside the boot.

(408) ———.

1917. "MICHELAINES" FOR THE SOLDIERS. *Jour. Amer. Med. Assoc.* 68: 1634. illus.

Describes "Michelaines," which are woolen bands 48 inches long and 16 inches wide, which can be used as a head, throat, chest, or arm protector.

(409) ———.

1919. FITTING THE SHOE TO THE SOLDIER. THE EVOLUTION OF A SATISFACTORY SYSTEM OF MEASURING THE SOLDIER'S FOOT. *Sci. Amer.* 120: 56, 63, illus.

General discussion of footwear for soldiers, giving various mechanical devices for measuring and fitting their feet properly.

(410) BEEVOR, W. C.

1894. THE SOLDIER'S SORE FOOT. *Jour. Roy. United Serv. Inst.* 38: [243]-265, illus.

General discussion of foot hygiene in the Army, pointing out the importance of properly fitting shoes and the ailments caused by improper ones. The author proposes a new shoe conforming more nearly to the shape of the foot and having light heel and toe plates.

(411) BERGEMANN.

1907. ZUR HYGIENE DER MILITÄR-FUSSBEKLEIDUNG. [Concerning the hygiene of army footwear.] *Vrtljschr. Gerichtl. Med. u. Öffentl. Sanitätsw.* (F. 3) 34: [363]-403.

The purpose of boots and shoes is to protect the foot from mechanical injury, and from exposure to wet, dirt, and extremes of temperatures. Low-cut, laced shoes to be worn in barracks and the top-boot are discussed from the standpoint of fit and material. An extensive bibliography is appended.

(412) BERTHIER.

1900. LES CONDITIONS D'UNE BONNE CHAUSSURE DE GUERRE. [The properties of good military footwear.] *Cong. Internatl. Med. Compt. Rend. Sect. Med. et Chirurg. Mil.* [Paris.] (Sect. Épidémiologie et Hyg.) 13: 294-500.

Discusses army shoes. Points out the disadvantages of the rubber sole between the leather one and the shoe, and recommends a comfortable, substantial shoe which will protect the foot from the wet, mud, and cold.

(413) ———.

1901. LA CHAUSSURE DE GUERRE DU FANTASSIN. [Army footwear for the infantry.] *Arch. Méd. et Pharm. Mil.* [Paris] 38: 366-399, illus.

General discussion of the need of good shoes in the Army. Each part of the foot is considered in relation to the corresponding part of the shoe. The adoption of better shoes is urged.

(414) ———.

1903. CHAUSSURE MILITAIRE [Military footwear.] *Caducée* 3: 318-320.

Detailed discussion and description of military footwear for use on the march and at rest. The need of greater foot comfort at both times is pointed out.

(415) BISCHOFF.

1912. ÜBER VERSUCHE MIT DEM "FUSSSCHONER" BEIM 1 BATAILLON 3, GARDE-REGIMENTS ZU FUSS. [An experimental study of the value of a foot protector, made with the First Battalion of Third Guard Regiment.] Deut. Militärärztl. Ztschr. 41: [561]-574, illus.

An account of a device to which the spur may be attached, which, when properly adjusted, prevents the foot from slipping in the boot. The illustrations show the "protector" as worn and also its relation to the position of the bones of the foot. The author has a high opinion of the value of the device based on the experimental results.

(416) ———.

1913. ZUR FUSSSCHONERFRAGE. [On the foot-protector question.] Deut. Militärärztl. Ztschr. 42: 623-624.

The author discusses the use and advantages of the shoe protector, a device for keeping the foot from slipping in the shoe. (See 407 and 415.)

(417) BRADLEY, H. C.

1919. PROTECTIVE GARMENTS IN THE WAR GAS INDUSTRY. Jour. Indus. Hyg. 1: 255-258.

Describes materials and garments developed during the World War to protect workmen in plants manufacturing skin-irrigating gases and soldiers exposed to such gases in the field.

(418) BRIDGES, R. H.

1910. BOOTS. Jour. Roy. Army Med. Corps 14: 59-62, illus.

Discusses the importance to soldiers of well-fitting shoes and describes an ideal shoe for the army.

(419) BROCKBANK, E. M.

1927. MULESPINNERS' CANCER. INCIDENCE OF THE DISEASE. The Times [London] Royal ed., Nov. 23: 12. [Reprinted in Jour. Indus. Hyg. (Abstract Sect.) 10: 57-58, 1928.]

Maintains that an important cause of scrotal cancer among mule spinners is the friction from the fork of the combination overalls usually worn.

(420) BUTTERSACK.

1893. UEBER HOSENTRÄGER. [Concerning suspenders.] Arch. Hyg. 16: 73-77.

Considers chiefly the hygienic aspects of suspenders and of trousers. The author discusses the strain placed on the shoulders by suspenders when heavy objects are carried in the pockets and when the wearer is sitting or engaged in sports. The relation of this to disease is considered.

(421) CHEVALIER.

1893. DU TYPE DE CHAUSSURE À ADOPTER POUR L'INFANTERIE. [Concerning the type of footwear to adopt for the infantry.] Arch. Méd. Belg. (4) 1: [145]-159, illus. [German translation in Militärärztl. [Wien] 27: 121-124, 131-134, illus.] (Sup. to Wiener Med. Wchnschr.)]

General discussion of the need of good shoes in mobilization. Describes deformities of the feet due to ill-fitting shoes and gives suggestions for corrective ones.

(422) COLIN, H. J. A.

1891. AMÉLIORATION MÉCANIQUE & PHYSIOLOGIQUE DE LA MARCHÉ PAR LA CHAUSSURE À TALONS ÉLASTIQUES. [Mechanical and physiological improvement of the march by shoes with elastic heels.] Arch. Méd. et Pharm. Mil. [Paris] 17: 32-36.

Discusses army shoes then in use. Advocates a more elastic heel and sole and describes the results of using shoes of that type.

(423) COLLINGRIDGE, W.

1896. THE HYGIENE ON BOARD SHIP WITH PARTICULAR REGARD TO SAILORS AND TO STEERAGE PASSENGERS. 8th Cong. Internatl. Hyg. et Démog., Budapest (1894) 5: 39-48.

On page 47 the author suggests that "sailor's clothing should be mainly composed of woolen material, on account of its permeability, nonconducting properties and hygroscopic qualities."

- (424) COLLIS, E. L.
1927. SPINNERS' CANCER. *Lancet* [London] 213: 1418.
A letter attacking the views of Robertson (see 464 and 465) on the ground that the disease occurs in North America where the overalls are held up by belts instead of braces and therefore produce no friction on the scrotum.
- (425) COOK, A. B.
1895. MEN'S UNDERWEAR—A PLEA FOR COMFORTABLE CLOTHING. *Brooklyn Med. Jour.* 9: 99-101.
A 1-piece suit, rather than shirt and drawers, is advocated.
- (426) CORBUSIER, H. D.
1906. MILITARY HEADGEAR AND ITS RELATION TO THE HEALTH OF THE SOLDIER. *Jour. Assoc. Mil. Surg., U. S.* 18: 342-362.
A summary of the types of headdress worn at different periods by the soldiers of different countries is given with recommendations as to the kind best suited for use in the Tropics. The temperature of the inside of various kinds of hats is reported, as well as experiments with the use of orange and red silk linings as a protection against the actinic rays of the sun. Cases of sunstroke and headaches which were eliminated and prevented by the use of these linings are described.
- (427) ———.
1917. THE SOLDIER'S FOOT. *Amer. Med. (n. s.)* 12: 328-344, illus.
Maintains that many of the deformed feet of civilians can be improved sufficiently for army life by proper treatment, properly fitting shoes, exercise, and operation. Discusses causes, inconveniences, and treatment of abnormal feet.
- (428) CREUZÉ, P.
1916. MANTEAU ET SAC IMPERMÉABLES DE CONFECTION FACILE ET PEU COUTEUSE. [A cloak and knapsack easily made and of little cost.] *Gaz. Méd. Paris* 87: 5, illus.
Points out the advantages of having an army cloak and knapsack impermeable to wind, rain, and snow. Describes in detail such garments which may be made easily and cheaply from rectangular pieces of material.
- (429) CROSSMAN, E. C.
1921. NEEDED—A NEW ARMY UNIFORM. AN ARGUMENT AND A SUGGESTION REGARDING A CHANGE IN OUR DOUGHBOY'S OUTFIT. *Sci. Amer.* 125: 234.
A popular appeal for a more hygienic and comfortable uniform for the Army.
- (430) DILLINGHAM, C. K.
1928. INTERESTING USES FOR ASBESTOS. *Textile World* 74: 1098, illus.
The use of asbestos for fire-fighting suits is described.
- (431) GIDDINGS, H. A.
1917. COLD WEATHER CLOTHING. *Outing* 69: 432-438, illus.
Describes suitable clothing for cold-weather sports. Gives disadvantages of various kinds of sweaters, vests, and hunting jackets. Suggests a flannel shirt, vest of Beach cloth, "stag" shirt, cruising shirt, and an Alaska parka.
- (432) GILMAN, C. L.
1915. WET WEATHER WEAR. *Outing* 65: 671-673, illus.
The rainy day outfit consists of woolen underwear, wool socks, wool pants, flannel shirt, mackinaw overshirt, and felt hat.
- (433) GLASEWALD.
1915. WASSERDICHT FUSSEKLEIDUNG UND ERFRIERUNGEN. [Waterproof footwear and freezing of feet.] *Deut. Med. Wchnschr.* 41: 473-474.
A discussion of waterproof shoes for military use. The author contends that waterproof shoes are so stiff and heavy that they affect circulation and increase the danger of soldiers' feet being frozen in winter. They also prevent the evaporation of perspiration from the feet.

(434) GRANJUX.

1904. CHAUSSURES À SEMELLE ET À TALON ÉLASTIQUES. [Shoes with elastic sole and heel.] Caducée 4: 22-23, illus.

Describes the great endurance of soldiers and the longer marches accomplished when they have well-fitting and comfortable shoes. Discusses army shoes in general and proposes a shoe with a rubber inner pad between the shoe and the sole and heel.

(435) HALLEY, G.

1897 THE INFANTRY NATIONAL GUARD FOOT DRESS. Assoc. Mil. Surg. U. S. Proc. 7: 261-264.

General discussion of the need of comfortable shoes for soldiers. Suggest that soldiers' feet would be improved by the adoption of regulation shoes which conform to the normal shape of the foot, the subjection of applicants to a physical examination, and the exclusion of those with diseased or seriously impaired feet.

(436) HAVARD, V.

1917 MANUAL OF MILITARY HYGIENE FOR THE MILITARY SERVICES OF THE UNITED STATES. Ed. 3, rev., 809 p., illus. New York, William Wood & Co.

On pages 418 to 452, clothing and uniform are discussed. Each garment is considered in detail with regard to its hygienic and utilitarian value. Such subjects as properties of textile fabrics, nonactinic colors, and Solaro fabrics are included. Tropical clothing is considered in connection with a discussion of service in warm climates.

(437) HÖGYES, F.

1896. DAS BESTE SCHUHWERK DES MILITÄRS. [The best kind of shoes for soldiers.] 8th Cong. Internatl. Hyg. et Démog., Budapest (1894) 5: 258-261.

As a hygienic measure the author advocates that, instead of leather, the soles of army shoes be made of a composition (Bakancsen) consisting of heavy linen, asbestos, and rubber. It is somewhat adhesive and keeps the foot from slipping about. Thirteen hundred pairs of shoes were made for trial in the Hungarian Army.

(438) HOFFMANN, F. L.

1923. MULE-SPINNERS' CANCER. U. S. Dept. Labor, Mo. Labor Rev. 27 (3): 27-45.

A review of the British reports on mule-spinners' cancer, including statistics on the occurrence of the disease in this country. Robertson's opinion that the cancer is caused by the friction of the overalls is mentioned. (See 464.)

(439) HOHENBERG, J.

1891. UEBER DIE ZWECKMÄSSIGSTE BEKLEIDUNG VON SCHIFFSBESATZUNGEN UNTER VERSCHIEDENEN KLIMATISCHEN VERHÄLTNISSEN. [The most suitable clothing for seamen under various climatic conditions.] [74] p. Berlin. (Inaug. Diss.) [Abstract in Hyg. Rundschau 2: 105-108. 1892.]

An extensive study of the clothing of German seamen. Includes a resumé of the physical characteristics of different textile materials and recommendations as to the design of garments and composition of fabrics which should be worn by seamen under different climatic conditions.

(440) HÜEBER.

1885. VORSCHLÄGE ZUR HYGIENISCH-RATIONELLEN FELDMÄSSIGEN BEKLEIDUNG UND AUSRÜSTUNG. [Suggestions for hygienic and rational clothing and equipment in the field.] Deut. Militär-ärztl. Ztschr. 14: [195]-215.

An extensive article based on experience and study which discusses from a hygienic standpoint each garment necessary for military wear. The author advocates woolen clothing rather than cotton for most purposes.

- (441) JALADE, E.
1922. LA CHAUSSURE DU SOLDAT: CHOIX DES CUIRS À EMPLOYER, CONFECTION, ENTRETIEN ET IMPERMÉABILISATION. [The footwear of the soldier: selection of leather, construction, upkeep and waterproofing.] Arch. Méd. et Pharm. Mil. [Paris] 76: [621]-670, illus.
General discussion of shoes for the soldier, stressing the need for greater comfort.
- (442) JAMES, W. B.
1918. THE RELATION OF DRESS TO HEALTH, WITH SPECIAL REFERENCE TO THE ARMY UNIFORMS. Med. Rec. [New York] 93: [617]-620.
Author objects to the military uniform because it tends to hermetically seal the body from contact with the air. Maintains that the more open and lighter clothing of women develops a more efficient vasomotor system and is more hygienic than men's clothing.
- (443) JONES, A. J.
1917. MAKING THE FEET FOR MILITARY SERVICE. Mil. Surg. 41: 219-230, illus.
The author specifies a shoe and describes exercises for correcting feet with minor defects and putting them into shape for military life. Statistical results of a shoe inspection are given. A report of Gen. Leonard Wood's orders for footwear on the march is incorporated in this article.
- (444) JORDAN, A. C.
1927. SUNNIER MODES FOR MEN. Sunlight 1 (5): 11-15, illus.
Objections are made to men's present dress. The author suggests more convenient and hygienic clothing for sports, professional, and evening wear. Suits for town and for tennis are described and illustrated.
- (445) KILBOURNE, H. S.
1898. THE MILITARY SHOE. Jour. Mil. Serv. Insts. U. S. 22: 482-494, illus.
Calls attention to defects in the military shoe and their effect on the soldiers. A type of shoe for military use is suggested with methods for its upkeep.
- (446) KOLLMANN.
1881. EINE KURZE BETRACHTUNG ÜBER DIE BESCHUNG DER INFANTERIE. . . . [A short talk on shoes for the infantry.] Corresp.-Bl. Schweiz. Ärzte. 11: 686-688.
The author discusses army shoes and shoemakers. He believes a laced boot is more satisfactory and comfortable than a top-boot.
- (447) KROCKER.
1902. BEKLEIDUNG UND AUSRÜSTUNG DES SOLDATEN. [Clothing and equipment of the soldier.] Klin. Jahrb. 9: 63-100, illus.
Includes a general discussion of the hygienic requirements of military clothing and summarizes data on the physical properties of fabrics and clothing as they affect health. Clothing for the Tropics, weight of clothing, and related topics are discussed in detail.
- (448) LANGE, S. J. DE.
1906. UNTERSUCHUNGEN ÜBER DIE BEKLEIDUNG VON ARBEITERN IN VERSCHIEDENEN LEBENSUMSTÄNDEN. [Account of the clothing of working men in different circumstances.] Arch. Hyg. 56: 393-418, illus.
A unique paper describing and illustrating the clothing worn by men of Holland working at different occupations. The garments are discussed from the standpoint of their suitability to the occupation and their hygienic value.
- (449) LATSON, W. R. C.
1909. COMFORT AND YOUR SUMMER CLOTHING. Outing 54: 499-501.
A physician's advice on men's clothing for summer. Advocates light, loose garments, Panama hats, loose collars, coats cut so that there is no pressure on the back of the neck, and trousers buckled over the hips in order to make suspenders and belts unnecessary. Discusses the harmful effects of improper clothing.

(450) LAUZA.

1915. LA COUVERTURE DE TROUPES. SON EMPLOI COMME VÊTEMENT ET SAC DE COUCHAGE. [The soldier's covering. Its use as clothing and sleeping bag.] Caducée 15: 17-21, illus.

Describes the use of a soldier's blanket as a coat as well as a bed covering. Detailed instructions, illustrated by half tones and diagrams, are given for making this coat-blanket and showing how it may be arranged on the march.

(451) ———.

1915. A PROPOS DE LA DEMI-COVERTURE DE TROUPE EMPLOYÉE COMME VÊTEMENT ET SAC DE COUCHAGE. [On the subject of the covering of troops used as clothing and as bed covers.] Caducée 15: 118-119.

Further discussion of the combination blanket and overcoat devised by the author see 450 with approving comments by various army officers.

(452) LEITCH, A.

1927. MULESPINNERS' CANCER. The Times [London] Royal ed. Nov. 3: 10. [Reprinted in Jour. Indus. Hyg. (Abstract Sect.) 10: 55-56. 1928.]

Local friction caused by blue trousers is mentioned as a possible cause of cancer of the scrotum among mule spinners.

(453) LOSSEN, K.

1916. EIN NEUER MARSCHRIEMEN. [A new strap for use on the march.] Deut. Med. Wchnschr. 42: 912-913, illus.

Describes a new type of strap to keep the foot from sliding in the shoe and to hold the foot cloth (a cloth often greased with tallow and folded around the legs in a certain way to take the place of socks). Chafing and similar troubles are thus prevented.

(454) MANN, W. L.

1919. SUGGESTED MODIFICATIONS OF THE MARINE SHOE. U. S. Naval Med. Bul. 13: 625-628, illus.

Calls attention to defects in the marine shoe and suggests changes. Advocates two styles of shoes, semidress, and heavier field shoe.

(455) ——— and FOLSOM, S. A.

1920. A MANUAL ON FOOT CARE AND SHOE FITTING FOR OFFICERS OF THE U. S. NAVY AND U. S. MARINE CORPS. 124 p., illus. Philadelphia, P. Blakiston, Sons & Co.

Discusses the selection, care, and fitting of rational footwear with regard to the particular requirements of the marines. Describes in great detail the process used in fitting shoes to the marines stationed at Quantico, Va.

(456) MELVILLE, C. H.

1912. BOOTS. Jour. Roy. Army Med. Corps 19: 63-76, illus.

General discussion of army shoes of various countries and their effect on the feet. Advocates wearing shoes instead of boots. Lightweight shoes are suggested for camp work.

(457) MUNSON, E. L.

1901. THE THEORY AND PRACTICE OF MILITARY HYGIENE. 971 p., illus. New York, William Wood & Co.

Chapter 6 deals with the selection of clothing for military use, and discusses suitable styles and materials for each garment, air permeability, absorption and conductance of heat, absorption of moisture, and waterproofing of different types of fabrics.

(458) ———.

1908. THE MILITARY SHOE AND THE MILITARY FOOT. Jour. Mil. Serv. Insts. U. S. 42: [275]-293, illus.

Points out that governmental economy in shoes for the Army decreases the efficiency of the soldier. Not only should the best leather be used but a surplus of shoes should be on hand so that the soldiers may be fitted at any time. Detailed instructions are given for measuring the foot and fitting the shoe.

(459) MUNSON, E. L.—Continued.

1917. *THE SOLDIER'S FOOT AND THE MILITARY SHOE: A HANDBOOK FOR OFFICERS AND NONCOMMISSIONED OFFICERS OF THE LINE.* 147 p., illus. Menasha, Wis., George Banta Publishing Co.

Discusses the fitting, upkeep, and supply of military shoes, as well as the anatomy, care, and possible injuries of the foot. Socks are also considered briefly.

(460) MUSKAT.

1907. *DIE VERHÜTUNG DES PLATTFUSSES MIT BERÜCKSICHTIGUNG DER WEHRFÄHIGKEIT.* [The prevention of flat foot, especially with respect to army service.] *Hyg. Rundschau* 17: [1318]–1331.

An exhaustive discussion of flat foot in the German Army with statistical data showing its decrease. Data are also given on the occurrence of flat foot in several other countries. Proper shoes are suggested as a means of preventing this deformity.

(461) PIETRA SANTA, J. DE.

1898. *HYGIÈNE MILITAIRE; LA CHAUSSURE.* [Military hygiene; the footwear.] *Jour. Hyg.* [Paris] 23: [133]–136.

The author discusses the history of shoes, the need for comfortable shoes in the army, and footwear as related to climate, weather, and hygiene. Pleads for shoes of better quality and greater comfort.

(462) PLUMMER, E. H.

1896. *MARCHING SHOES FOR TROOPS.* *Jour. Mil. Serv. Insts. U. S.* 19: 480–484.

The author advocates a heelless shoe conforming to the general shape of the foot as the best for marching troops. He considers the shoe ordinarily furnished for the Army defective and uncomfortable.

(463) PRAT.

1898. *CHAUSSURE DU FANTASSIN.* [Footwear of the infantry.] *Arch. Méd. Navale* [Paris] 70: 59–65.

Cites several cases of the sickness and discomfort of soldiers wearing improper shoes on the march. The author advocates longer, wider, better-fitting, and more comfortable shoes. A brief history of the development of soldiers' shoes is included.

(464) ROBERTSON, J.

1927. *AN INQUIRY IN REGARD TO THE CAUSE OF SPINNERS' SCROTAL CANCER.* *Jour. Indus. Hyg.* 9: 217–238, illus.

The author contends that such cancer is due to the dirty scrotum, the dye of the overalls, the friction from the cloth, especially at the fork of the overalls and the use of an inelastic brace.

(465) ———.

1927. *SPINNERS' SCROTAL CANCER.* *Lancet* [London] 213: 1273–1274.

Criticizes a report on the causes of scrotal cancer among mule spinners. The author emphasizes his opinion that this is due to the friction of the fork of blue or white overalls. An editorial (*ibid* 1239–1250) discusses the report and this paper.

(466) ROSENAU, M. J.

1921. *PREVENTIVE MEDICINE AND HYGIENE.* Ed. 4, 1567 p., illus. New York and London, D. Appleton & Co.

The section on military hygiene includes a short discussion on clothing for soldiers. This has been omitted from subsequent editions.

(467) ROUYER, E.

1912. *AU SUJET DU VÊTEMENT DES TROUPES EN MARCHÉ.* [On the subject of the clothing of marching troops.] *Soc. Méd. Mil. Franç. Bul.-Bimens.* 6: 535–538.

An article on the clothing worn by marching troops in the summer, dealing particularly with the advantages and disadvantages of tights, leggings, and the beret.

(468) RUGH, J. T.

1918. THE ARMY SHOE AND MILD FOOT DISABILITIES. Jour. Amer. Med. Assoc. 71: 1215-1216, illus.

Reports examinations of the feet of soldiers when they first entered the service and after they had been in the service for some time. The number of foot deformities had been greatly reduced through care and the wearing of proper shoes.

(469) ———.

1919. EFFECTS OF LEGGINGS AND PUTTEES ON THE FEET AND LEGS OF THE SOLDIER. Mil. Surg. 44: 409-414, illus.

Report of a study made in the United States Army. In the examination of 30,000 men, in various ranks, the only disabling infection which could be traced to leggings resulted from their misfit. The type and arrangement of drawer cuff, cuff of sock, garter, lacing, breeches cuff, and legging or puttee are all considered in the discussion.

(470) SALQUIN, S. A.

1883. THE MILITARY SHOE. Translated by H. L. B. 58 p., illus. Washington, Government Printing Office; U. S. Sec. War Rpt. 1: 491-520, illus.

A translation of an article written in 1874 (German original not seen). Discusses the purpose of shoes and their relation to the anatomy of the foot. The construction and advantages and disadvantages of the fashionable and the common-sense shoe are compared. The author describes a military shoe which he considers ideal and stresses the need for accurately measuring each foot before fitting it.

(471) SARRAZIN, N.

1916. RAPPORT D'UN MÉMOIRE SUR UNE NOUVELLE FORME À DONNER À L'HABILLEMENT MILITAIRE. [Report of a memoir on a new form of military clothing.] Chron. Méd. 23: 370-371.

Report of a memoir written in 1793 which discussed the unhygienic aspects of army uniforms. The author points out that even at that early date the unsatisfactory characteristics of the uniform were recognized and describes a type more comfortable and less constrictive.

(472) SCHLOSSBERGER.

1913. ÜBER EINE AM MILITÄRSTIEFEL ANZUBRINGENDE VERBESSERUNG. [Concerning the improvement of an army shoe.] Deut. Militärärztl. Ztschr. 42: 620-623.

Description of device that prevents the blistering of feet during marching. It consists of an arrangement of straps which can be worn over a boot and, when properly adjusted, will prevent the foot from slipping about. The author reports that it had been used successfully for one year.

(473) SCHRÖTTER, H.

1915. ÜBER EINEN ZWECKMÄSSIGEN SCHNITT DER SOLDATENHOSE. [A suitable fashion for soldiers' trousers.] Militärärztl. [Wien] 49: 499-502, illus. (Sup. to Wiener Med. Wchnschr.)

Trousers and other garments then worn by soldiers were so difficult to unfasten that they were inconvenient and unsanitary. The trousers suggested buttoned on each side and were held in place by suspenders. They were more sanitary, caused the loss of less time on the line of march, and were more comfortable to wear.

(474) SCHUSTER.

1914. DIE MARSCHKRANKHEITEN, IHRE ENTSTEHUNG, VERHÜTUNG UND BEHANDLUNG. [Sickness of men on the march—its cause, prevention and cure.] Deut. Med. Wchnschr. 40: 1885-1887.

Discussion of the injuries and troubles which may develop among marching soldiers and methods of curing them. Some of these troubles are due to ill-fitting and excessive clothing. A device to prevent the foot from slipping in the shoe is suggested.

- (475) STARCKE, P.
1881. DER NATURGEMÄSSE STIEFEL. AUF GRUND ANATOMISCH—PHYSIOLOGISCHER BETRACHTUNGEN MIT SPECIELLER BERÜCKSICHTIGUNG DER BEKLEIDUNG UND PFLEGE DES FUSSES BEI DER ARMEE. [The natural shoe; on the basis of anatomical—physiological observations, with particular attention to the clothing and care of the feet in the army.] Aufl. 2, 88 p., illus. Berlin, Ernst Siegfried Mittler & Sohn.
A general discussion of the subject, stressing the importance of healthy feet in the army.
- (476) TEMPLE-WRIGHT, R.
1895. THE MARCHING POWERS OF OUR SOLDIERS. *Brit. Med. Jour.* 1895 (v. 2) : 1264.
A letter in which the author describes his practices in caring for the feet of his soldiers, especially those who are in India and Burma.
- (477) UNNA, P. G.
1915. URSACHEN UND VERHÜTUNG DER KALTEN FÜSSE. [Causes and prevention of cold feet.] *Hyg. Rundschau* 25: [393]–414.
The cold, wet feet of soldiers who stand in rifle pits have prompted tests of methods and materials which would remedy this condition. Suitable wrappings for the feet and the waterproofing of shoes are considered in detail.
- (478) UNITED STATES WAR DEPARTMENT. OFFICE OF THE SURGEON GENERAL.
[n. d.] MINOR FOOT AILMENTS: SHOE FITTING. A MANUAL FOR NONCOMMISSIONED OFFICERS AND SELECTED ENLISTED MEN. 32 p., illus.
Detailed discussion of the various deformities of the feet caused by ill-fitting shoes and methods of treatment. Specifications for army shoes are also considered.
- (479) WALKER, N. D.
1913. MILITARY GREAT-COATS. *Jour. Roy. Army Med. Corps* 21: 545–560, illus.
A description of the greatcoats worn by the armies of various countries with details of the method employed in Great Britain to waterproof the material used for the coats of the British Army.
- (480) WEBB-JOHNSON, C.
1914. THE SOLDIERS' FEET AND FOOTGEAR. *Brit. Med. Jour.* 1914 (v. 2) : 702–705, 748–750, illus.
The author discusses the evolution of the foot, the effect of shoes on the feet, the selection and care of shoes and socks for soldiers, and the hygiene of the feet.
- (481) WEINER, E.
1897. DIE HYGIENISCHE BEURTHEILUNG DER MILITÄR-KLEIDUNG UND RÜSTUNG. [The hygienic estimation of military clothing and equipment.] 307 p., illus. Wien and Leipzig, Wilhelm Braumüller.
Detailed treatise on those aspects of textiles and clothing which are important in military life. Hygienic aspects of clothing and bedding are discussed at length. Many experimental data on the physical properties of fabrics are included.
- (482) WHITE, R. P.
1927. SPINNERS' CANCER. *Lancet* [London] 213: 1366.
Opposes the contentions of Robertson (see 464 and 465) on the ground that physical injuries, without other contributing factors, have not been proved capable of originating cancer.
- (483) ZÜLCH.
1899. VORSCHLÄGE FÜR EINE VERBESSERUNG DER FUSSPFLEGE IN DER ARMEE BESONDERS BEI DEN FUSSTRUPPEN. [Suggestions for better care of the feet in the army, especially of the infantry.] *Deut. Militärärztl. Ztschr.* 28: 147–156.
The perspiration of the feet and methods of taking care of it are considered chiefly. The author discusses the discomfort of soldiers who march without hose and the offensive odor and chilling which result. He advocates that an insole of absorbent material be used.

WOMEN'S CLOTHING

(484) ANONYMOUS.

1785. OBSERVATIONS SUR LES EFFETS DE LA COMPRESSION HABITUELLE FAITE AVEC DES CORPS TROPS ETROITS & EXCESSIVEMENT SERRÉS. [Observations upon the effects of the habitual compression of the body by too tight and excessive clothing.] Jour. Méd. Chirurg. Pharm. [Paris] 65: 413-419.

Of historical interest. Discusses many diseases considered at that time to be due to wearing tightly laced corsets.

(485) ———.

1833. DU DANGER DES CORSETS TROP SERRÉS. [The danger of too tight corsets.] Magasin Pittoresque 1: 99, illus.

General discussion of the ill effects of tightly laced corsets on the structure of the bones and the internal organs.

(486) ———.

1868. DEATH FROM TIGHT LACING. Lancet [London] 1868 (v. 1): 675.

Reports a case of apoplexy of the lungs in consequence of unusually tight corset lacing.

(487) ———.

1882. LADIES' DRESS SOCIETY. Knowledge 2: 49.

A general discussion of rational dress, giving the objects of the Rational Dress Society and the procedure for joining it. The objects are "to promote the adoption, according to individual taste and convenience, of a style of dress based upon consideration of health, comfort, and beauty and to deprecate constant changes of fashion which can not be recommended on any of these grounds."

(488) ———.

1882. ANTI-CORSET PHILOSOPHY AND HISTORY. Knowledge 2: 415-416.

Cites statements of personal experiences which show that tight lacing is pleasant and beneficial. Contends that personal experiences are of infinitely more value for practical purposes than theoretical discussions of lungs, diaphragms, chest capacity, nature, anatomy, and Greek women.

(489) ———.

1882. CORSET PHILOSOPHY. Knowledge 2: 478-479.

Ridicules the idea that binding can weaken the muscles.

(490) ———.

1883. STAYS AND STATUES. Knowledge 3: 23-24.

Arguments in favor of the wearing of corsets, commented upon by R. A. Proctor.

(491) ———.

1883. RATIONAL DRESS. Knowledge 3: 329.

Points out various defects in men's clothing and suggests that they perfect their own clothing before attacking women's.

(492) ———.

1883. DRESS REFORM ONCE MORE. Sat. Rev. 55: 592-593. [Reprinted in Eclectic Mag. (n. s. 38) 101: 205-208.]

Report of an address advocating trousers for women and soft collars for men. Of historical interest in connection with the dress reform movement.

(493) ———.

1883. LADIES' DRESSES. Boston Med. and Surg. Jour. 109: 381.

Excerpt from a letter of Horace Dobell in the London Times. The hips are recommended as the best part of the human frame for the support of the clothing.

(494) ———.

1885. RATIONAL DRESS. Knowledge 8: 333-334.

General report of Sharman Crawford's visit to America. Tells of the progress of the Rational Dress Society and of the costumes of some of its members.

(495) ANONYMOUS.—Continued.

1887. CORSETS AND TIGHT LACING. *Lancet* [London] 1887 (v. 1): 1296-1297.

General discussion of the compression of the organs in the body due to tight lacing. The author believes this condition less serious now since women are beginning to wear their corsets looser and in some cases to omit them entirely.

(496) ———.

1893. DRESS REFORM AT THE WORLD'S FAIR. *Rev. of Reviews* [New York] 7: 312-316, illus.

Presents program of the National Council of Women of the United States for introducing reform dress at the World's Fair in Chicago. Of historical interest.

(497) ———.

1897. THE INFLUENCE OF CYCLING ON WOMAN'S DRESS. *Pediatrics* 4: 78-79.

Short paragraph showing the influence of cycling and exercise on the clothing of women. Particular attention is called to the enlargement of the waist.

(498) ———.

1900. THE DANGERS OF TRAILING SKIRTS. *Current Lit.* 29: 433.

Brief review of a paper read by Doctor Casagrandi before a medical association at Rome in which he described a study of the germ content of skirts that sweep the streets.

(499) ———.

1902. FRAUENBEKLEIDUNG. [Women's clothing.] *Arch. Phys. Diätet. Ther. Ärztl. Praxis* 4: 47-48 [151].

Deals with the woman's dress-reform movement. Includes a short discussion of corsets and the manner in which clothes should hang from the body.

(500) ———.

1903. [DRESS REFORM.] *Internatl. Studio* 19: 60-64, illus.

A news item of historical interest regarding the German Society for the Improvement of Dress. Describes an exhibition of reform dresses designed by well-known artists and a fête arranged by the Berlin branch of the society at which these dresses were worn.

(501) ———.

1905. GERMAN AND AMERICAN DRESS REFORM. *Independent* 59: 524-526.

Author holds that American women have attained the more healthful modes of clothing for which German women are fighting. Walking skirts have been shortened, and underwear is more hygienic, comfortable, and lighter.

(502) ———.

1905. THE CORSET. *Amer. Med.* [Philadelphia] 9: 88-89.

Brief historical sketch of the corset as given by M. and Mme. F. Lacroix (see 633).

(503) ———.

1905. PRINCE FERDINAND'S CORSET EDICT. *Amer. Med.* [Philadelphia] 9: 638.

An editorial of historical interest regarding the signing of an edict by Prince Ferdinand of Bulgaria prohibiting school girls and young women from wearing corsets because of the harmful effects.

(504) ———.

1906. THE SCAVENGER SKIRT. *Canad. Mag.* 27: 471-472.

Short editorial discussing the dangers resulting from skirts that sweep the streets.

(505) ———.

1910. AN ANATOMICAL VINDICATION OF THE STRAIGHT FRONT CORSET. *Current Lit.* 48: 172-174, illus.

A résumé of articles by George M. Gould (*The Medical Record*) and W. Arbuthnot Lane (*London Lancet*) endorsing the therapeutic efficiency of the straight-front corset.

(506) ANONYMOUS.—Continued.

1914. SHOULD A WOMAN SINGER WEAR A CORSET? *Musician* 19: 338-339, 410-411, illus.

A symposium of opinions of various singers on this question.

(507) ———.

1918. LOW HEELED SHOES FOR OFFICE WORK. *Illus. World* 30: 260, illus.
Reports an experiment showing that low-heeled shoes produce less physical strain on stenographers who sit for hours in one position than do high-heeled shoes.

(508) ———.

1920. THE BARE-NECK EVIL. *Lit. Digest* 65 (1): 116.

A London surgeon maintains that insufficient clothing about the throats of women is causing an increase in goiter.

(509) ———.

1920. A CLOTHING INFORMATION BUREAU. *Jour. Home Econ.* 12: 325-326.
Describes the clothing work of the Women's City Club of Boston. One of the aims is to show that health can be conserved or injured by the manner of dressing and that efficiency can be increased through the correct covering of the body.

(510) ———.

1921. WISE WOMEN WHO DRESS LIGHTLY. *Lit. Digest* 68 (13): 47.
[From the *Guardian* (Manchester).]

Discusses the weight of clothing in its relation to the occurrence of pneumonia and colds. Contends that clothes should be as few and light in weight as possible, the optimum amount varying with each individual mainly in proportion to the sensitiveness of his vasomotor mechanism.

(511) ———.

1921. A DEFENSE OF HIGH HEELS. *Jour. Amer. Med. Assoc.* 77: 1760.

An abstract from a lecture delivered at the Institute of Hygiene in London by W. H. Trethowan, an orthopedic surgeon, who considers other features of the shoe as important as the heel. He favors a heel from $1\frac{1}{4}$ to $2\frac{1}{2}$ inches in height.

(512) ———.

1922. THE FIRST OF THE FLAPPERS. *Lit. Digest* 73 (7): 44, 46, illus.

Dress reform promoted by Mrs. Bloomer in 1851. Of historical importance.

(513) ———.

1922. MODERN FOOTWEAR AS A CAUSE OF FATIGUE. *Current Opinion* 72: 232-233.

General discussion of the bad effects of heels on the perpendicular of the body and the contraction and relaxation of the muscles. Reports a case in which the wearing of high heels necessitated the use of corsets.

(514) ———.

1922. A WAR AGAINST TIGHT SHOES. *Lit. Digest* 74 (3): 23-24.

General discussion of the ill effects of tight shoes. The author compares them with tight corsets and holds that they cause almost as much illness.

(515) ———.

1924. THE IMPORTANCE OF BEING BEAUTIFUL. *Vogue* 63 (12): 52-53, 108, illus.

Points out that most foot ailments are due to lack of exercise of the joints. Emphasizes the importance of perfect-fitting shoes and stockings to posture and health.

(516) ———.

1925. FASHION AND DISEASE. *Amer. Jour. Pub. Health* 15: 790.

Describes a chronic erythema of the legs of girls and young women thought to result from wearing short skirts and silk stockings. Victims are chiefly between the ages of 14 and 20 years.

- (517) ANONYMOUS.—Continued.
 1927. THE POPE'S APPEAL TO MEN TO REFORM WOMEN'S DRESS. Lit. Digest 92 (5) : 27-28, 57-59.
 Extracts from the Pope's appeal and comments on it from religious magazines. The subject is discussed from the standpoint of the religious, moral, and hygienic aspects of women's clothing.
- (518) AMESBURY, J.
 1840. SUBSTITUTES FOR STAYS AND CORSETS. PATENT BODY SUPPORTS CONSTRUCTED UPON SCIENTIFIC PRINCIPLES. . . . 8 p., illus., London, W. Clowes & Sons.
 Shows how the parts of the body can be supported by patent body supports which aid rather than hinder development. They do not compress but simply help hold organs in place.
- (519) BATES, M. E.
 1894. THE NEW MOVEMENT IN DRESS REFORM. Colo. State Med. Soc. Trans. 1894: 325-336.
 Outlines object of reform movement which includes abolishment of laced corsets, numerous petticoats, and weight hung from hips.
- (520) BAUS, G. V. J.
 1910. ÉTUDE SUR LE CORSET. [Study of the corset.] 84 p. Bordeaux. (Thesis no. 26.)
 Treatise condemning the corset from the hygienic point of view. Various chapters deal with the history of the corset, its relation to feminine beauty, and its influence on the various muscles and organs and the general well-being of the wearer.
- (521) BECKER, L. E.
 1888. ON STAYS AND DRESS REFORM. Sanit. Rec. (n. s.) 10: 149-151.
 Advocates remodeling rather than abandoning the corset. Recommends placing the weight of garments on the hips thus avoiding tension and weight on the shoulders. Women should reduce the total weight of their clothing, dispense with unnecessary underskirts, wear their dresses as short (especially at back and sides) "as is consistent with an agreeable and presentable appearance."
- (522) BENDERSKY, J.
 1898. DIE KLEIDUNG DER FRAUEN UND DIE LAGE IHRES MAGENS. [Clothing of women in the region of the stomach.] Ztschr. Krankenpflege 20: 16-18.
 Contends that the rational wearing of a suitable corset may render a service. A great deal of women's suffering comes from narrow petticoat bands which cause pressure on the stomach. The author suggests a sash about the waist to which the underwear is attached thereby eliminating the "drag" of the corset.
- (523) BETTS, H. L.
 1889. THE DRESS OF WOMEN: ITS RELATION TO THE ETIOLOGY AND TREATMENT OF PELVIC DISEASE. Boston Gynecol. Soc. Trans. (n. s.) 1: 119-132, illus.
 Discusses the clothing of individuals from childhood to womanhood and points out its harmful effects upon the physical condition of women. Tight bands, corsets, and long skirts hinder normal, healthy development.
- (524) BIEBER, A.
 1912. DAS MODERENE KORSETT. [The modern corset.] Deut. Med. Wchnschr. 38: 1796-1798.
 A discussion of the harmful effects produced by corsets. Opinions gathered from various sources are included.
- (525) BLAQUIÈRE, D. DE.
 1884. MODERN DRESS REFORMERS. Leisure Hour 33: 557-563, illus.
 Outlines dress-reform movement; its origin and the garments advocated.

(526) BOAS.

1908. DIE GEFAHREN DES KORSETTS, EIN BEITRAG ZUR HYGIENE DER KLEIDUNG. [The harmful effects of corsets, a contribution to the hygiene of clothing.] Allg. Wiener Med. Ztg. 53: 262, 274.

General summary of the opinions of 35 authors on the relation of the corset to hygiene. Gives complete bibliography of the authors mentioned.

(527) BONNAUD.

1770. DÉGRADATION DE L'ESPÈCE HUMAINE PAR L'USAGE DES CORPS À BALEINE. . . [The degradation of the human species through the use of whalebone frames.] 219 p. Paris, Hérissant.

Of historical interest. Discusses the bad effects of whale-bones on the internal organs and the resulting deformation of the chest and abdomen.

(528) BONSERGENT, J. E.

1816. RÉFLEXIONS SUR LES INCONVÉNIENTS DES CORSETS DONT LES FEMMES FONT USAGE. [Reflections on the inconveniences of the corsets used by women.] 30 p. Paris. (Thèse no 56)

Discussion of the inconveniences as well as harmful effects of corsets and the "busc."

(529) BOUVIER.

1852. RECHERCHES SUR L'USAGE DES CORSETS. [Researches on the use of corsets.] Bul. Acad. Méd. [Paris] 18: 355-384, 389-396. [Reprinted in Gaz. Méd. Paris (3) 8: 93-101, 107-116. 1853.]

Critical and historical discussion of the corset is given in the first section. The second part gives the author's views concerning the advantages of wearing a corset.

(530) ———.

1853. ÉTUDES HISTORIQUES ET MÉDICALES SUR L'USAGE DES CORSETS. [Historical and medical studies of the use of corsets.] 36 p. Paris, J. B. Baillière.

General discussion of corsets from the historical and medical point of view. Deformity in the bone structure and disturbance of the proper working of the internal organs are ascribed to the use of corsets.

(531) ———.

- 1854-55. RAPPORT SUR UN BUSC INVENTÉ PAR MESDAMES BRASSEUR-CORDELOIS ET BECQUET. [Report on the "busc" invented by Mme. Brasseur-Cordelois and Mme. Becquet.] Bul. Acad. Méd. [Paris] 20: 1106-1110.

An account of the difficulties encountered with corsets and the advantages of the suggested one. Reports that this "busc" presents no particular advantage from the medical point of view.

(532) ——— and BOULAND, P.

1877. CORSET. Dictionnaire Encyclopédique Sci. Méd. Paris 20: 745-777, illus.

Defines a corset and discusses in detail the construction, physiological effects, and method of putting on a corset. The orthopedic corset is also considered.

(533) BROSN.

1899. NOCH EINMAL "DIE LUCAS CRANACH-AUSSTELLUNG ALS BEITRAG ZUR FRAUENKLEIDUNGSREFORM." [Once more "The Lucas Cranach Exhibition as a contribution to the woman's clothing reform movement."] Deut. Med. Wchnschr. 25: 580-581.

A controversial article opposing the ideas of A. Shantz. The author believes in the abolition of corsets. He refers to his previous writing in which he advocates the use of a band about the waist to which the undergarments can be attached.

(534) BURGER, H.

1899. EIN ERSATZ DES CORSETTES. [A substitute for corsets.] München. Med. Wchnschr. 46: 1176-1177, illus.

Illustrates and describes several varieties of belts and supports for different figures.

(535) BUSEY, S. C.

1883. THE INFLUENCE OF THE CONSTANT USE OF HIGH-HEELED FRENCH SHOES UPON THE HEALTH AND FORM OF THE FEMALE, AND UPON THE RELATION OF THE PELVIC ORGANS. *Amer. Gynecol. Soc. Trans.* (1882) 7: [243]-262. illus. 1883. *Gaillard's Med. Jour.* 37: 620-632. illus. 1884. [Abstract in *Amer. Jour. Obstet.* 15: 954-956. 1882.]

Historical and physiological discussion of shoes, anatomy of the foot, and internal disorders and deformities produced by improper footwear with regard to individual, sex, and race.

(536) BUTIN, F.

1900. CONSIDÉRATIONS HYGIÉNIQUES SUR LE CORSET. [Hygienic considerations concerning the corset.] 96 p., illus. Paris. (Thèse no. 526.)

Includes historical discussion and opinions of various physicians concerning the use of corsets. The effect of this garment on the bony structure, respiration, circulation, digestion, and the genito-urinary organs especially during pregnancy are considered in detail. The author concludes that the corset as commonly constructed should be condemned and should be modified to conform to hygienic principles.

(537) CABANÈS.

1902. L'ANTIQUITÉ DU CORSET. [The antiquity of the corset.] *Jour. Santé* 19 (990): 505-507.

Study of the evolution of the corset, from the girdles of of the ancient Greeks to the garments of the twentieth century. Attempts of doctors to suppress its use and contemporary struggles against this apparel are described.

(538) CANNADAY, C. G.

1894. THE RELATION OF TIGHT LACING TO UTERINE DEVELOPMENT AND ABDOMINAL AND PELVIC DISEASES. *Amer. Gynecol. Obstet. Jour.* 5: 632-640; *Va. Med. Mo.* 21: 623-630.

Paper read before the International Medical Congress in Rome, Italy, 1894. Describes the position, development, and character of the abdominal organs and explains how harm is done to these through tight lacing.

(539) CARTER, T. W.

1846. THE MORBID EFFECTS OF TIGHT-LACING. *South. Med. and Surg. Jour.* (n. s.) 2: 405-409.

Declares that tight lacing causes excessive prevalence of uterine derangements and constitutional debility which is in turn transmitted from a mother to her child directly or indirectly.

(540) CAUER, M.

1907. DRESS REFORM IN GERMANY. *Independent* 63: 993-997.

The author points out that the healthful rather than the fashionable aspects of women's dress are being emphasized. The new type of garments with natural waist and flowing lines, introduced in Germany, is also meeting approval in other countries.

(541) CEYSSENS, E.

1857. ÉPILEPSIE PAR DES HABITS TROP SERRÉS. [Epilepsy because of too tight clothing.] *Ann. Méd. Flandre Occident*, 5 Année: 365-370.

The author describes in detail a case of epilepsy due to tight lacing when the patient was very young.

(542) CHALMERS, E.

1912. NEW WAYS WITH NEW CORSETS. *Delineator* 79: 341, 344, illus.

Maintains that the corset of that day gives necessary support where it is needed without injury to the organs. Describes how to put on the corset correctly.

(543) CHAFOTOT, E.

1891. L'ESTOMAC ET LE CORSET. [The stomach and the corset.] 106 p., illus. Lyon. (Thèse no. 629.)

Includes an historical consideration of the corset, and a discussion of the anatomy and action of the stomach. The

- (543) CHAPOTOT, E.—Continued.
author shows how the compression by the corset dislocates the stomach and affects the nervous system as well as other parts of the body. The treatment of conditions caused by this compression is also discussed.
- (544) CHASE, H. S.
[1891.] A PACK OF FOOLS. 16 p., illus. St. Louis, Mo., the author.
A plea for abandoning tight corsets and high heels. Points out the injurious effects of these upon the health of the wearer. Written in a dramatic, popular style.
- (545) CHRISTIAN, K. B.
1924. CLOTHES AND THEIR RELATION TO HEALTH. Ky. Agr. Col. Ext. Circ. 170, 13 p., illus.
Especially stresses the importance of proper corsets, shoes, and undergarments if women are to be efficient in business and homemaking.
- (546) CLELAND.
1880. TIGHT LACING, VENOUS CONGESTION, AND ATROPHY OF THE OVARIES. Glasgow Med. Jour. 13: [89]–92.
Describes case in which tight lacing seems to have induced the condition cited.
- (547) CLEMENT, E. W.
1906. DRESS REFORM IN JAPAN. World To-day 10: 547–548, illus.
Description of dress reform movement started by the students of Woman's University, Tokyo, for a becoming and foreignized costume which would give greater freedom of motion and meet the demands of physiology and hygiene.
- (548) COLLINS, W. J.
1888. THE EFFECT OF TIGHT LACING UPON THE SECRETION OF BILE. Lancet [London] 1888 (v. 1.): 518.
Reports an experiment on guinea pigs in which the action of the secretion was noted before and after binding their waists. The bile secretion was reduced to one-half by reducing the thorax circumference by one-fourth.
- (549) CORBIN, E.
1830. DES EFFETS PRODUITS PAR LES CORSETS SUR LES ORGANES DE L'ABDOMEN, ET EN PARTICULIER SUR LE FOIE. [Concerning the effects produced by corsets on the organs of the abdomen and in particular on the liver.] Gaz. Méd. Paris 1: 151–153.
A description of two cases in which corsets affected the abdominal organs.
- (550) COWL, W. Y.
1881. ON TIGHT LACING AS A CAUSE OF DISEASE. Homeopathic Jour. Obstet. 3: 35–42.
Paper read before the New York State Homeopathic Medical Society. The speaker contends that tight lacing is the most important cause of disease among civilized women. In general it causes lessened respiration, impairs digestion, and impedes circulation besides producing specific, localized abdominal troubles.
- (551) CRUTCHFIELD, E. L.
1897. SOME ILL EFFECTS OF THE CORSET. Gaillard's Med. Jour. 67: [1]–11.
The author enumerates a number of diseases the source of which can be traced directly to tight lacing. The opinions and investigations of authorities are cited in each case. He believes that the muscles of the abdomen do not need support.
- (552) CUTLER, A. L.
1918. CORSETS FOR WOMEN WORKERS. Lit. Digest 58 (2): 22–23.
[From the "Nurse," Jamestown, N. Y.]
Stresses the importance of well-fitting corsets for women workers.
- (553) CUTLER, A. S.
1916. CORSETS VERSUS BACKACHE AND FATIGUE. Boston Med. and Surg. Jour. 175: 168–169.
The author believes that correctly adjusted corsets relieve backache and eliminate many of the ills suffered by women.

(554) CYPRIENNE.

1901. VERBESSERTE FRAUENKLEIDUNG. [Improved clothing for women.]
 Rothe Kreuz 19: 48-49.

Points out how fashion has ruled the design of woman's clothing, and discusses improvements and changes occurring from the period of corsets and heavy clothing to the time of writing.

(555) DAGRON, G.

1911. INCONVÉNIENTS DE LA MODE ACTUELLE DE LA CHAUSSURE FÉMININE.
 [Inconveniences of the present mode of feminine footwear.]
 Clinique [Paris] 6: 651-652, illus.

General discussion of women's shoes, pointing out their effect on the muscles of the feet and legs and on the body perpendicular.

(556) DARDELIN, H.

- [1905.] LE CORSET PHYSIOLOGIQUE FAIT SUR MOULAGE: "L'ANTIPTOSE."
 [The physiological corset made by measurements: "l'antip-tose."] 42 p., illus. [Paris], Charles Schlaeber.

A study of the evils of the corset, with diagrams and illustrations showing the malformations resulting from certain types of corsets, particularly the straight-front type. Quotations are given from various doctors regarding the harm done by corsets. Concludes with an appeal to women to wear the proper type of corset, for beauty as well as for health.

(557) DELISLE, E. J. G.

1834. SUR L'EMPLOI DES CORSETS. [On the use of corsets.] 32 p. Paris.
 (Thèse no. 92.)

Advantages and disadvantages of corsets are discussed.

(558) DEVOLL, S. W.

1875. DRESS REFORM. Me. Med. Assoc. Proc. 5: 232-243.

A plea for comfortable and sensible dress. The evils of the corset are discussed.

(559) DICKINSON, R. L.

1887. THE CORSET: QUESTIONS OF PRESSURE AND DISPLACEMENT. N. Y.
 Med. Jour. 46: [507]-516, illus.

Corset pressure was measured by means of a manometer. Distribution of pressure and resulting displacement of the organs were observed. Diagrams show comparisons between figures with and without corsets.

(560) ———.

1893. SIMPLE AND PRACTICAL METHODS IN DRESS REFORM; WITH SCHED-
 ULES OF INSTRUCTIONS TO PATIENTS, AND ILLUSTRATIONS.
 Amer. Gynecol. Soc. Trans. 18: [411]-433, illus.

Advocates abandoning the corset and all tight waistbands. Exercises are given for strengthening the abdominal muscles sufficiently to make artificial support unnecessary.

(561) ———.

1911. TOLERATION OF THE CORSET: PRESCRIBING WHERE ONE CAN NOT
 PROSCRIBE. Amer. Jour. Obstet. 63: 1023-1058, illus.

General discussion of the corset problem with recommenda-tions for better corsets. Results of pressure measurements taken with a manometer contradict the claim that abdominal girdling and lifting have taken the place of waistline pres-sure. Certain types of body form are more susceptible to defective corseting.

(562) DIX, D.

1914. WOMEN AGAINST NATURE. Good Housekeeping 59: 397-400, illus.

Popular article ridiculing women who ignore the laws of hygiene in the pursuit of fashion.

(563) DRURY, C. D. H.

1881. BACKACHE. Brit. Med. Jour. 1881 (v. 1): 467.

A letter from a physician describing the case of a young girl who was cured of backache by discontinuing the wearing of high-heeled shoes.

- (564) DUCKWORTH, D.
1880. ON TIGHT LACING. *Practitioner* 24: [11]-15.
The author stresses that corsets are usually worn too tight and cause several of the common ailments of women. However, corsets secure warmth and in the case of adult fleshy women are a suitable support.
- (565) DUGDALE, H. A.
1883. STAYS AND HEALTH. *Knowledge* 3: 346-347.
Reports personal experiences of a woman who never wore stays. A similar dress reform for other women is advocated.
- (566) ETCOB, H. G.
1892. THE WELL DRESSED WOMAN: A STUDY IN THE PRACTICAL APPLICATION TO DRESS OF THE LAWS OF HEALTH, ART, AND MORALS. 253 p., illus. New York, Fowler & Wells Co.
Discusses the effects of dress, particularly corsets and tight shoes, on health.
- (567) ELLIS, J.
[n. d.] THE GREAT EVIL OF THE AGE. . . 4 p. [n. p.]
Advocates reform dress and elimination of corsets.
- (568) ESKRIDGE, F.
1916. THE RELATION OF THE MODERN STYLE OF DRESS TO FEMALE DISORDERS AND ITS INTEREST TO RAILROAD SURGEONS. *Internatl. Jour. Surg.* 29: 127-128.
Many of the pelvic disorders of women which are attributed to railroad injuries are actually due to the harmful effects of tightly fitting clothing.
- (569) ESPAGNE, A.
1855. OBSERVATION D'ÉTAT CHLOROTIQUE ANCIEN COMPLIQUÉ DE PHTHISIE PULMONAIRE; MORT-NÉCROPSIE; DÉSORDRES PRODUITS PAR L'USAGE DU CORSET. [Observation on an old complicated chlorotic condition of pulmonary consumption; an autopsy; disorders produced by the use of the corset.] *Ann. Cliniques Montpellier* 3: 310-311.
Report of an autopsy of a woman who had worn a corset since she was 15 years of age.
- (570) EULENBURG, A.
1905. DIE UMGESTALTUNG DER WEIBLICHEN KLEIDUNG ALS HYGIENISCHER FORTSCHRITT. [Remodeling of women's clothing as a hygienic measure.] *Ztschr. Krankenpflege* 27: 364-369.
The author contends that a radical extermination of diseases produced by the corset can not be expected until the interest of the masses is concentrated on the building up of the body through gymnasium exercises and sport.
- (571) FANTON.
1879-80. APERCU HISTORIQUE ET HYGIÉNIQUE SUR LE VÊTEMENT; LE CORSET. [Historical and hygienic observation on clothing—the corset.] *Marseille Méd.* 16: 708-713. 1879. 17: 48-57. 1880.
Traces the development of the corset from the ancient Greeks to modern times, and deplors its evolution into a garment which disguises and disfigures the natural beauty of women.
- (572) FARNSWORTH, E. O.
[1915.] THE ART & ETHICS OF DRESS, AS RELATED TO EFFICIENCY AND ECONOMY. [57] p., illus. San Francisco, Paul Elder & Co.
Discusses the function of clothing and its selection with regard to fitness, beauty, and ethics. Describes the so-called Patricia garment, a four-in-one undergarment, for women, invented by the author and advocated as a corset substitute for adolescents.
- (573) FITCH, W. E.
1898. TIGHT LACING—ITS RELATION TO UTERINE DEVELOPMENT AND TO DISEASES OF THE FEMALE ORGANS OF GENERATION. *Ga. Jour. Med. and Surg.* 2: [289]-293; *Va. Med. Semi-Mo.* 3: 77-79.
Brief review of pelvic anatomy and the injurious effects of tight lacing upon the abdominal and pelvic organs.

- (574) FITCH, W. E.—Continued.
 1907. CORRECTION OF FAULTY FASHIONS IN DRESS AN IMPORTANT FACTOR IN THE TREATMENT OF DISEASES OF WOMEN. *Charlotte Med. Jour.* 31: 241-247, illus.; *Med. Rec.* [New York] 2: 644-648, illus.
 Description of the anatomy affected by tight lacing and the diseases and injuries which occur through such practice.
- (575) FITZ, G. W.
 1896. A STUDY OF TYPES OF RESPIRATORY MOVEMENTS. *Jour. Expt. Med.* 1: [677]-692, illus.
 From experimental evidence the author concludes that both sexes naturally breathe alike. Many of the apparent differences are due to constricting dress which causes preponderance of thoracic movement in ratio to its restriction of abdominal movement and to the sensitiveness of the nervous coordination.
- (576) FLACHS.
 1905. VERBESSERTE FRAUENTRACHT. [Improved clothing for women.] *Ztschr. Tuberk. u. Heilstättenw.* 7: 221-223.
 Advocates lighter, looser, and more simple clothing for women with the weight distributed between the hips and shoulders.
- (577) FLOWER, B. O.
 1893. PARISIAN FASHIONABLE FOLLY VERSUS AMERICAN COMMON SENSE. *Arena* 8: 130-144, illus.
 Discusses dress-reform movement. Of historical interest.
- (578) FLYNT, O. P.
 [1882.] MANUAL OF HYGIENIC MODES OF UNDER-DRESSING FOR WOMEN AND CHILDREN. 39 p., illus. Boston, [C. M. A. Twitchell & Co.]
 Describes underwear for women and girls invented and manufactured by the author in an effort to provide more healthful garments than were in fashion at that time. Of historical interest.
- (579) FOTHERGILL, W. E.
 1903. SOME REMARKS ON CORSETS. *Med. Press and Circ.* (n. s.) 76: 25-27.
 Maintains that the use made of corsets is wrong, not the corset itself. Considers corsets necessary for the support of heavy skirts fastened on waistbands.
- (580) FOURNIER.
 1813. CORSET. *Dictionnaire Sci. Méd.* [Paris] 7: 117-124.
 Treats of the purpose, use, history, and hygienic properties of the corset.
- (581) FOWLER, O. S.
 1846. TIGHT-LACING FOUNDED ON PHYSIOLOGY AND PHRENOLOGY; OR, THE EVILS INFLICTED ON MIND AND BODY BY COMPRESSING THE ORGANS OF ANIMAL LIFE. 16 p., illus. New York, O. S. and L. N. Fowler & S. R. Wells.
 The author explains the functions of the "vital organs" and contends that tight lacing causes a cramped condition and prevents the free circulation of the blood and the physical activity necessary for health.
- (582) FREUDENBERG.
 1902. ZUR REFORM DER FRAUENKLEIDUNG. [For the reform of women's clothing.] *Frauenarzt* 17: 207-210, illus.
 Suggests a princess-slip type of dress which does not exert pressure and can be adapted to all the needs of a woman. It is hygienic without producing an ungraceful figure even during pregnancy or nursing.
- (583) FÜRST, L.
 1903. ZUR HYGIENE UND ÄSTHETIK DER FRAUENKLEIDUNG. [The hygiene and aesthetics of women's clothing.] *Deut. Med. Presse* 7: 140-142, illus.
 Discusses need for a hygienic and æsthetic remodeling of women's clothing. Loose garments allowing freedom of movement and natural growth are much more healthful and beautiful.

(584) GACHES-SARRAUTE.

1895. ÉTUDE DU CORSET AU POINT DE VUE DE L'HYGIÈNE. [Study of the corset from the point of view of the hygiene of women's clothing.] Rev. Hyg. et Police Sanit. 17: 399-407; Rev. Méd.-Chirurg. Maladies Femmes 17: 389-398.

Paper read before the Society of Public Medicine and Professional Hygiene, April 24, 1895. The author believes that the corset is necessary to support clothing which hangs from the waist. However, a tight corset restrains breathing and the action of the digestive tract and the kidneys, prevents erect posture, and binds parts of the body which should be free. Reform types are suggested.

(585) ———.

1896. L'HYGIÈNE DU CORSET; ÉTUDE CLINIQUE ET PROPHYLACTIQUE; DÉDUCTIONS PRACTIQUES, D'APPLICATION, RELATIVES AU CORSET LE MIEUX APPROPRIÉ. [The hygiene of the corset; a clinical and prophylactical study; practical deductions, concerning application, relative to the best adapted corset.] Tribune Méd. (2) 27: 406-412, illus.

The author contends (1) that the corsets worn are made contrary to the laws of anatomy, and are injurious to health; (2) that women will not and can not do without them; (3) that the corset causes physiological discomforts, which may and do become disorders; (4) that these results are due to the wrong form of the corset, and the abnormal position which it causes the body to take; (5) that the necessity of the corset lies solely in its supporting of the lower garments, but that this is a secondary consideration with the corset worn. A "rational" corset which does away with the evils of the ordinary corset is described.

(586) ———.

1897. LA RADICGRAPHIE ET L'HYGIÈNE DU CORSET. [Radiography and the hygiene of the corset.] Tribune Méd. (2) 28: 286-288, illus.

An article accompanied by X-ray photographs showing the differences between the uncorseted figure and figures wearing the old type and the author's new type of corset. The physiological advantages of the new corset are given.

(587) ———.

1900. LE CORSET; ÉTUDE PHYSIOLOGIQUE ET PRATIQUE. [The corset; a physiological and practical study.] 131 p., illus. Paris, Masson et Cie.

The author has made a general study of the corset and points out its purposes, physiological effects, advantages, and disadvantages. Diagrams show the normal position of body organs as contrasted with organs displaced by improper corsets.

(588) ———.

1906. LE CORSET; SON APPLICATION EN MÉDECINE ET EN CHIRURGIE. [The corset; its application in medicine and surgery.] Cong. Internatl. Méd. 15 (Sect. 5): 335-349, illus.

A discussion of the advantages of the author's corset over old corsets, with illustrations and cases showing the benefits derived from the Gaches-Sarraute corset and the correction of physical disorders effected by wearing this corset instead of high, tightly laced type.

(589) GALBRAITH, A. M.

1916. PERSONAL HYGIENE AND PHYSICAL TRAINING FOR WOMEN. Ed. 2, 393 p., illus. Philadelphia and London, W. B. Saunders Co.

On page 164 the author very briefly discusses clothing which impedes normal respiration. Corsets, heavy clothing suspended from the shoulders, and tight bands around the neck, are considered. On pages 281 to 282 advantages of the short walking skirt and requirements for a winter dress are given.

- (590) GARNY, A.
1854. DU CORSET. [The corset.] 32 p. Paris. (Thèse no. 243.)
A study of the influence of the corset upon pregnancy and upon the respiratory, circulatory, and digestive organs, and the breast and the uterus.
- (591) GARSON, J. G.
1888. THE EFFECTS PRODUCED BY WEARING CORSETS OR STAYS. Illus. Med. News [London] 1: 78-79, 103-105, 133-134, illus.
Describes the effects of pressure upon the structure and physiological action of the body constricted by corsets and tight clothing.
- (592) GLÉNARD, F.
1902. HYGIÈNE—LE VÊTEMENT FÉMININ ET L'HYGIÈNE. [Hygiene—women's clothing and hygiene.] Rev. Sci. [Paris] (4) 17: 388-394, 425-434, illus.
Discussion of the corset in its aesthetic and hygienic relations. The author deplores the contemporary corset as being neither aesthetic nor hygienic, and discusses improvements being made which, in his opinion, will make the corset both healthful and essential.
- (593) GLITSCH, R.
1904. SEXUALORGANE UND FRAUENTRACHT. [Sexual organs and women's clothing.] Monatsschr. Harnkrankheiten u. Sexuelle Hyg. 1 (8): 237-249.
Discusses anatomy of the body briefly and points out the harmful effects of the laced corset upon the generative organs. Present garments are unnatural, unhygienic, and unaesthetic. Advocates reform girdle and loose clothing allowing natural movement.
- (594) GODMAN, J. D.
1829. INJURIOUS EFFECTS OF TIGHT LACING ON THE ORGANS AND FUNCTIONS OF RESPIRATION, DIGESTION, CIRCULATION, ETC. Boston Med. and Surg. Jour. 2: [481]-484, 497-500.
Enumerates the various injuries caused by tight lacing.
- (595) GREAT BRITAIN. HOME DEPARTMENT.
1917. PROTECTIVE CLOTHING FOR WOMAN AND GIRL WORKERS EMPLOYED IN FACTORIES AND WORKSHOPS. 15 p., illus. London, H. M. Stationery Office.
Describes clothing which safeguards the worker against accident or injury to health, secures comfort and convenience, and protects the ordinary clothing against damage by materials and machinery.
- (596) GREEN, R. M.
1915. CORSETS, PTOSIS AND SACRO-ILIAC STRAIN. Med. Press and Circ. (n. s.) 99: 517-518.
States the ills resulting from too tightly and improperly fitted corsets. Enumerates the essentials of a good corset, and describes the proper technic of putting it on.
- (597) GRINIEWITCH, DE.
1899. UN NOUVEAU CORSELET: "LE COLLIMASTE." [A new corselet, "le collimaste."] Gaz. Méd. Paris 70: 332-334, illus.
A lecture proposing a new type of corselet similar to the modern brassiere and giving a complete description of its construction.
- (598) GRISSON.
1906. PRAKTIISCHE VORSCHLÄGE ZUR HYGIENE DER FRAUENKLEIDUNG. [A practical proposal for the hygiene of women's clothing.] München. Med. Wehnschr. 53: 2113-2115, illus.
Advocates the abolition of the corset and the adoption of clothing hung from the shoulders.
- (599) GROSSMAN, J.
1916. A PLEA FOR THE PREVENTION AND THE TREATMENT OF WEAK FEET OCCURRING DURING PREGNANCY AND THE PUERPERIUM. Med. Rec. [New York] 90: 1074-1075.
This article gives the symptoms of flat feet during pregnancy, outlines their treatment, and describes fully the proper shoe for this period.

(600) GUTTMANN.

1896. DAS KORSET UND SEINE ERSATZMITTEL. [The corset and its substitutes.] Aertzl. Praktiker [Berlin] 9: [353]-361.

Discusses the purpose of the corset, its ill effects, and numerous substitutes that have been introduced and worn mainly during sports and gymnasium exercises.

(601) H., M. H.

1923. WOMEN'S FASHIONS AND HEALTH. Hygeia [Chicago] 1: 525-526.

A short résumé of an article by Mosher (see 657).

(602) HACKMANN, K. H.

1894. SCHNÜRWIRKUNGEN. [Tight-lacing.] [20] p. Kiel. (Inaug. Diss.)

Résumé of the ill effects of tight lacing on the feminine organs.

(603) HAIRE, A. P.

1918. MEDICAL CORSETRY. Med. Rev. of Reviews 24: 209-211.

Points out that the corset worn in 1918 is similar to a medical corset because of its low front and looseness.

(604) HARBERTON.

1888. ON DRESS REFORM AND STAYS. Sanit. Rec. (n. s.) 10: 263-265.

A reply to Lydia Becker (see 521). The author would abolish the corset entirely. The exertion necessary to walk in heavy long skirts is emphasized.

(605) HARBERTON, F. W.

1882. RATIONAL DRESS REFORM. Macmillan's Mag. 45: 456-461.

Plea for more suitable clothing for women to replace the existing dress which is neither artistic nor beautiful.

(606) HARDY, H. J.

1824. SUR L'INFLUENCE DES CORSETS ET L'OPÉRATION DU CANCER DE LA MAMELLE. [On the influence of corsets and operation of cancer of the breast.] 25 p. Paris. (Thèse no. 240.)

Three cases of cancer are ascribed to wearing corsets. An operation for cancer of the breast is described.

(607) HASSLAUER.

1904. HESSINGSCHES FRAUENKORSETT. [Hessing's corset.] Verhandl. Deut. Gesell. Gynäkologie (1903) 10: 456-474.

Demonstration of the corset introduced by Hessing which is claimed to correct all of the injurious effects of the ordinary corset.

(608) HIRSCHFELD, F., and LOEWY, A.

1912. KORSETT UND LUNGENSPIZENATMUNG. [Corsets and shallow respiration.] Berlin. Klin. Wchnschr. 49: 1702-1704, illus.

Measurements were taken of the frequency and depth of respiration, and the volume of air taken in per minute by a man, two women, and two children with and without corsets. In every case where corsets were worn the frequency increased while the lung capacity decreased. The object was to discover the effect of corsets in causing tuberculosis.

(609) H. [UBERT], E.

1895. LES MÉFAITS DU KORSET. [The bad effects of the corset.] Rev. Méd. [Louvain] 14: 169-174.

Discusses the bad effects of the corset on the internal organs, especially those of respiration, digestion, and circulation.

(610) HUGGENBERG, M.

1909. BEITRÄGE ZUR FRAUENKLEIDUNG. [Contribution to women's clothing.]. Aertzl. Polytech. 31: 151-156, illus. (Illus. Monatsbeilage to Ztschr. Krankenpflege u. Klin. Ther.)

Description of a corsetlike bodice which takes the place of the corset and the lining of the dress. Discusses a gymnasium suit for girls which is held in place by a special bodice and when worn with an overskirt makes a good school or street costume.

- (611) HUTCHINSON, W.
1908. *INSTINCT AND HEALTH*. 334 p. New York, Dodd, Mead & Co.
Discusses the history and development of clothing and the mistaken ideas that pelvic diseases are caused by tightly fitting corsets and that pneumonia is the result of wearing too little clothing. The scanty clothing worn by women is not harmful. Dangers lie in too thick or nonporous clothing which does not permit sufficient ventilation and in too closely fitting clothing which hinders muscular development. The author also discusses shoes.
- (612) ———.
1925. *HEALTH AND SPORTS SUITS*. Sat. Evening Post 198 (Aug. 1): 20-21, 137-138, illus.
A humorous comparison of modern and past styles in women's clothing. Contrasts the healthful clothing now worn by women with present fashions in men's clothes.
- (613) INTERNATIONAL CONFERENCE OF WOMEN PHYSICIANS.
[1920.] *RESOLUTIONS ON HEALTH ADOPTED BY THE INTERNATIONAL CONFERENCE OF WOMEN PHYSICIANS*. Internatl. Conf. Women Physicians Proc. 1: 11-15.
Includes a resolution urging the adoption of clothing which permits freedom of movement. Particular mention is made of corsets, boots, and shoes.
- (614) ———.
[1920.] *DISCUSSION ON CORSETS AND GOWNS*. Internatl. Conf. Women Physicians Proc. 1: 154-160.
Reports the opinions on clothing expressed by a number of women physicians.
- (615) IVIÈRE, R.
1876. *DU CORSET*. [Concerning the corset.] Rev. Lit. Méd. [Paris] 1: 5-7.
A criticism of the contemporary corset, branding it as ridiculous, and referring to the various discomforts, disorders, and diseases which result from wearing it.
- (616) JANVIER, A.
1901-02. *LE CORSET RATIONAL*. [The rational corset.] Bul. Soc. Belg. Gynécol. et Obstet. 12: 75-90, illus.
General article on the corset, showing the harmful effects produced by corsets too tightly laced or too high, and advocating and illustrating the "rational" corset.
- (617) JORDAN, A. C.
1926. *MY LADY'S SHOES*. New Health Bul. 1 (4): 12-13, illus.
Maintains that fashion is responsible for the shoes which are deforming women's feet and which are totally out of keeping with modern athletic womanhood. The women themselves must insist upon a hygienic shoe, until the public has become educated.
- (618) JUILLY, G.
1916. *LE CORSET*. [The corset.] Clinique [Montréal, Canada] (n. s.) 7: 261-264, illus.
Brief review of the use of corsets from early times with descriptions and comparisons of the good and bad types of modern corsets, and short discussions on the effects of each.
- (619) KELLOGG, J. H.
1876. *THE EVILS OF FASHIONABLE DRESS AND HOW TO DRESS HEALTHFULLY*. 38 p. Battle Creek, Mich., Health Reformer.
Discussion of the injuries resulting from wearing corsets, pullbacks, garters, heavy skirts, thin shoes, high heels, and false hair, and also from exposing certain portions of the body. Suggestions for dress improvement are included.
- (620) ———.
1888. *EXPERIMENTAL RESEARCHES RESPECTING THE RELATION OF DRESS TO PELVIC DISEASES IN WOMEN*. Mich. State Med. Soc. Trans. 1888: 322-343.
Results of experimental studies on the function of respiration in civilized and uncivilized women, the influence of the respiration upon the pelvic organs, the influence of waist con-

- (620) KELLOGG, J. H.—Continued.

striction upon intrapelvic pressure, the amount of external pressure exerted by a tight corset and tight bands, and the amount of displacement of the uterus produced by waist constriction.

- (621) ———.

1891. THE INFLUENCE OF DRESS IN PRODUCING THE PHYSICAL DECADENCE OF AMERICAN WOMEN. Mich. State. Med. Soc. Trans. 1891: [41]–74, illus.; Nursing Rec. 15: 83–85, 103–104, 123–124, 143–144, 164–166, 185–187. 1895.

The author shows that the small waist of civilized woman is a deformity. A corset causes injuries to the pelvic organs, prevents muscular development, and is directly responsible for drooping shoulders, flat chest, abnormal respiration, and ungraceful carriage.

- (622) ———.

1894. THE RELATION OF STATIC DISTURBANCES OF THE ABDOMINAL VISCERA TO DISPLACEMENTS OF THE PELVIC VISCERA. Cong. Périodique Internatl. Gynécol. et Obstet. 1 Sess. 1892: 604–628, illus.

Author believes that unhealthful mode of dress and lack of proper muscular exercise are the principal causes of the visceral prolapse in the abdomen and pelvis of American women. The thoracic space demanded by respiration is secured only by downward displacement of the viscera. Diagrams show the evil influence of waist constriction and dragging skirts. In men, the cause can be traced to belts or other constricting garments. The author measured the pressure under bands and corsets by a mercurial manometer and studied the influence of waist constriction by graphic methods. Observations were made by means of an air pessary with a recording tambour, the movements of which were registered upon a kymographion.

- (623) KENEALY, A.

1904. THE CURSE OF CORSETS. Nineteenth Cent. 55: 131–137.

Discusses in general the physiological injuries as well as the mental degradation resulting from the wearing of tight corsets. Experiments are cited in which monkeys were encased in corsets which produced disastrous effects upon them.

- (624) KING, E. M.

1881. DRESS REFORM. Sanit. Rec. (n. s.) 2: 443–444, illus.

Discussion of how fashions originate and the ignorance and disregard of health shown in the selection of clothing. The aims for which a dress society should strive are given.

- (625) ———.

[1882.] WOMEN'S DRESS IN RELATION TO HEALTH. Brighton Health Cong. Trans. 1881: [283]–294.

The author criticises severely the clothing worn by women as being extremely injurious to health and less beautiful than clothing which follows the natural lines of the body. Women consider adornment in clothing, and if reform leaders would have healthful clothing adopted, they must advance something more beautiful than the ugly lines of the bloomer costume.

- (626) ———.

1882. RATIONAL DRESS. Knowledge 2: 132–133.

Discusses dress from the artist's viewpoint and advocates reform.

- (627) KLEIN, H.

1903. UEBER DIE FRAUENKLEIDUNG VOM STANDPUNKTE DER HYGIENE [Women's clothing from the standpoint of hygiene.] Monatsschr. Gsundhtspflege. 21: [161]–174.

Discussion of the purposes and hygiene of clothing and the injurious effects of constricting clothing upon the ribs and digestive tract. Stiff, tight collars and tight garters, shoes, hats, veils, eyeglasses, and hairdressing are also discussed from a hygienic viewpoint. The author approves shorter skirts than those in vogue at that time.

(628) KLEINWÄCHTER.

1895. UEBER EINE GESUNDHEITSGEMÄSSE ART, DIE KLEIDER DER FRAUEN ZU TRAGEN. [A healthful suitable means of supporting women's clothing.] Schles. Gesell. Vaterländ. Cult. [Breslau] (1894) 72 (1 Abt. Med. u. Hyg. Sect.) 1-5, illus.

After mathematical consideration, supporters were designed to carry women's clothing so that the burden of weight falls from the shoulders. For those who need it, an especially designed bust support is advocated. It allows free movement and does not distort the natural shape of the body.

(629) KNOPF, S. A.

1928. TUBERCULOSIS AMONG YOUNG WOMEN. Jour. Amer. Med. Assoc. 90: 532-535, illus.

Attention is called to the present alarming relative increase in the morbidity and mortality from tuberculosis among young girls. Flimsy modern dress, tightly laced brassieres, thin stockings, and low shoes are discussed as important contributing factors.

(630) KRAUS, O.

1904. ÜBER DEN EINFLUSS DES KORSETTS AUF DIE SOMATISCHEN VERHÄLTNISSE. [Concerning the influence of the corset on the abdominal proportions.] Wiener Med. Wchnschr. 54: 333-339, 378-385, 403, illus.

A study of the ways in which the corset affects the various parts of the body which it covers. The material, style, and pressure are considered.

(631) KREY.

1902. DIE FRAUENKLEIDUNG UNTER DER KRITIK DES INGENIEURS. [Women's dress under the criticism of the engineers.] Bl. Volks- und Heilspflege 2: 265-268, illus.

Discussion of the manner in which women's clothing should be suspended from the body. The arguments are based upon scientific principles.

(632) L., W. B.

- [1868.] THE CORSET AND THE CRINOLINE. 237 p., illus. London, Ward, Lock & Tyler.

The last half of the book contains a discussion of the effect on health of wearing corsets. Many letters are included from women expressing their opinions. Most of them agree that extremely tight lacing is not injurious. The same book was issued in 1870 with the title, "The Freaks of Fashion."

(633) LACROIX, and LACROIX, F.

- [1904.] LE CORSET DE TOILETTE: SON HISTOIRE. [The dress corset: its history.] 64 p., illus. Paris, C. Boulangé.

General discussion upholding corsets, though advocating reform. Considers the corset from the viewpoint of the anatomical physiologist and orthopedic doctor. Gives a detailed history of corsets.

(634) LANGE, F.

1906. SCHULE UND KORSETT. [School and corset.] München. Med. Wchnschr. 53: 597-600, 657-659, illus.

The author believes that the ordinary corset alters normal bodily development and causes shallow breathing. He developed a corset which he claims is more desirable and does not constrict. He also devised a stocking supporter which does not interfere with the normal function of the lower abdomen.

(635) LAYET, A.

1827. DANGERS DE L'USAGE DES CORSETS ET DES BUSCS. [Dangers from the use of corsets and "buscs."] 47 p. Paris. (Thèse no. 148.)

A study of the harmful effects of the corset on the organs of the feminine body. The effect on the head is considered particularly.

- (636) LEESER.
1910. ZUR LÖSUNG DER KORSETTFRAGE. [The solution of the corset problem.] *Aerztl. Polytech.* 32: [65]–71, illus. (Illus. Monatsbeilage to *Ztschr. Krankenpflege u. Klin. Ther.*)
Describes and illustrates a form of corset that does not have the injurious qualities of the ordinary type. It can be adjusted to the form of the pregnant woman during all stages of pregnancy without injury, meanwhile strengthening the muscles and preventing the ordinary deformity of the figure during that period.
- (637) LEIGH, R.
1882. CORSET WEARING. *Knowledge* 2: 393.
Presents arguments from the physiological standpoint in support of the Rational Dress Association.
- (638) [LEIGHTON, J.] (LIMNER, L., pseud.)
1874. MADRE NATURA VERSUS THE MOLOCH OF FASHION. Ed. 4, 119 p., illus. London, Chatto & Windus.
General discussion of the history of women's clothing and its effect upon the body. Lists 97 diseases supposed to be induced by stays and corsets.
- (639) LEONARDSON, D. N.
1926. MODERN WOMEN ARE HYGIENICALLY DRESSED. *Hygeia* [Chicago] 4: 71–72, illus.
Suggestions are given as to suitable underclothing, outer garments, stockings, and shoes.
- (640) LEVEN.
1923. DIE MODERNE FRAUENKLEIDUNG. [The modern woman's clothing.] *Deut. Med. Wchnschr.* 54: 659.
Discusses the advantages and disadvantages of modern feminine wear from the hygienic viewpoint. In general, agrees with Rubner (see 689) on the need of improvement. Specific suggestions are given.
- (641) LÉVY-DU-PAN.
1922. DE L'EMPLOI DU CORSET EN GÉNÉRAL ET PRINCIPALEMENT EN OBSTÉTRIQUE. [The use of the corset generally and especially in obstetrics.] *Schweiz. Méd. Wchnschr.* [Basel] 52: 1109–1110.
The harmful effects of corsets are due not to the garment itself but to the improper use of it. The perils of wearing corsets are set forth, but the author states that these can be avoided by molding the corset on the figure instead of obliging the figure to mold itself into the corset. Properly used, the corset can be wholesome and without inconvenience.
- (642) LEWIS, D.
1882. CORSETS AND HEALTH—STRENGTH AND ACTIVITY OF WOMEN WHEN UNHAMPERED BY CORSETS. *Knowledge* 2: 493–494.
The author reports that in schools for physical education, the health of the women students was remarkably improved by discarding corsets and long, heavy skirts and by the use of those exercises which a short and loose dress permits.
- (643) ———.
1883. HEALTH OF CORSETED WOMEN. *Knowledge* 3: 69–70.
Declares that more than half of the professional business of practicing physicians comes from displacement of the pelvic viscera, due to corsets which reduce the waist from 3 to 15 inches.
- (644) LEWY-HIRSCH, J.
1923. ZUR HYGIENE DER FRAUENKLEIDUNG. [Concerning the hygiene of women's clothing.] *Deut. Med. Wchnschr.* 54: 659–660.
In contradiction to Rubner's views (see 689), the author maintains that women's dress is more rational than ever before and presents evidence in favor of this view.
- (645) LISFRANC.
1842. AVANTAGES ET INCONVÉNIENTS DU CORSET DANS SES RAPPORTS AVEC LA GLANDE MAMMAIRE. [Advantages and inconveniences of

- (645) LISFRANC.—Continued.
the corset in relation to the mammary gland.] Jour. Méd. et Chirurg. Prat. [Paris] 13: 263-266.
The author points out that the purpose of a corset is not to compress, raise, or lower the bust, but to support it. Women are urged to remove their stays.
- (646) M'WHINNIE, A. M.
1861. REMARKABLE CASE OF DISPLACEMENT OF AN ENLARGED LIVER FROM TIGHT LACING; AND ON A CASE OF OBLITERATION OF THE VENA PORTA. Lancet [London] 1861 (v. 1): 5-6.
A short account of two cases with the former disturbance and one with the latter.
- (647) MANLEY, T. H.
1898. THE CORSET; ITS USE AND ABUSE, WITH LACING AND TIGHT LACING. Va. Med. Semi-Mo. 3: 302-306, illus.
The author maintains that a correctly fitting corset is essential as a support.
- (648) MATHIEU, A.
1893. L'ESTOMAC ET LE CORSET. [The stomach and the corset.] Gaz. Hôpitaux 66: 994-995.
Discussion of how the tight corset presses the stomach and deforms it, hindering digestion and, by its tightness, often causing poor appetite and hence malnutrition and anaemia. The author also discusses other disorders resulting from the binding of the stomach by the corset.
- (649) MENGE, [K.]
1904. ÜBER DIE EINWIRKUNG EINENGENDER KLEIDUNG AUF DIE UNTERLEIBSORGANE BESONDERS DIE FORTPFLANZUNGSORGANE DES WEIBES. [Effect of tight clothing on the abdominal organs, especially the reproductive organs of women.] 19 p. Leipzig, Georg Thieme.
The author discusses in detail the anatomy and physiology of women and the pathological conditions which result from constriction due to tight lacing. It is harmful for the young girl, the woman, and the children she bears.
- (650) MESINGA.
1887. DIE HEUTIGEN MODEBLÄTTER UND DIE HEUTIGE MODE. [The present fashion plates and the present fashions.] Frauenarzt 2: 48-56.
Discusses tight lacing and its undesirable results.
- (651) MILLER, J. L.
1911. MERALGIA PARESTHETICA DUE TO PRESSURE OF THE CORSET. Arch. Int. Med. 7: [182]-183.
Reports a case of a woman who suffered from severe attacks of pain and sense of numbness over the upper and outer side of the right thigh. The attacks were excited by standing. A cure was effected by cutting away a portion of the corset that was pressing into the thigh.
- (652) MONGÉRI.
1863. LE CORSET ET SES DANGERS. [The corset and its dangers.] Gaz. Méd. Orient. Constantinople 7: [49]-54.
Describes the ill effects of tightly laced corsets on women in general and those of the Orient in particular with reference to climatic conditions. The author advises the use of an elastic corset which he considers more comfortable and graceful.
- (653) MOONEY, B. S.
1926. A CHILD IS TO BE BORN. VI. CLOTHING OF THE EXPECTANT MOTHER. Hygeia [Chicago] 4: 581-582, illus.
Suggests undergarments of knit cotton, 1-piece loose slips and dresses, and comfortable shoes with low heels for the pregnant woman. Normally, no corset is needed. A brassiere should be worn during the latter weeks.

- (654) MOORE, N.
1878. NOTES MADE IN THE CASUALTY DEPARTMENT. St. Bartholomew's Hosp. Rpt. 14: [145]-182, illus.
Page 165 shows the photograph and briefly describes the liver of a woman who had laced tightly.
- (655) MORGENSTERN, L.
1900. ZUR VERBESSERUNG DER FRAUENKLEIDUNG. [Improved clothing for women.] Bl. Volksgsndhtspflege. 1: 36-38.
Discusses slavery to fashion and the faults of women's clothing, including filthy, trailing skirts, and injuries resulting from tight lacing and high heels. The clothing of the mountain climber, the bicycle rider, and the field worker are cited as examples in clothing progress. There is also a short discussion of the best material for different articles of clothing.
- (656) MORTILLET, G. DE.
1888. LE CORSET—EST IL UTILE OU NUISIBLE? [The corset—is it useful or a nuisance?] Gaz. Gynécol. 3: 285.
Review of an article, Du mode respiratoire chez la femme. The chest breathing of women results entirely from wearing corsets. This aerates the lungs and is advantageous. Of 81 Indian women who never had worn stays, all but 3 had abdominal breathing.
- (657) MOSHER, C. D.
1901. THE FREQUENCY OF GALL-STONES IN THE UNITED STATES. (Abstract.) Bul. Johns Hopkins Hosp. 12: 253-259, illus.
Constrictive clothing is given as one of four possible factors in the production of gall-stones.
- (658) ———.
1923. SOME OF THE CASUAL FACTORS IN THE INCREASED HEIGHT OF COLLEGE WOMEN. THIRD NOTE. Jour. Amer. Med. Assoc. 81: 535-538, illus.
Attributes the increased height of college women largely to an increased amount of exercise and a change in fashion, which favors lighter and looser clothing.
- (659) ———.
1923. WOMEN'S PHYSICAL FREEDOM. Ed. 3, 87 p. New York, The Womens Press.
This is a revised and enlarged edition of Health and the Woman Movement. A portion of this book is devoted to a discussion of the effects of corsets and tight bands on menstruation, the injurious effect of tight brassieres, and the health problems of the feet.
- (660) ———.
1927. PERSONAL HYGIENE FOR WOMEN. 97 p., illus. Stanford University, California, Stanford University Press.
This volume serves as the fourth edition of Health and the Woman Movement and second edition of Woman's Physical Freedom. The hygienic aspects of clothing are considered. The author holds that constrictive clothing often causes painful menstruation and advocates standardized clothing for women for economic as well as other reasons.
- (661) MURCHISON, C.
1885. CLINICAL LECTURES ON DISEASES OF THE LIVER, JAUNDICE, AND ABDOMINAL DROPSY INCLUDING THE CROONIAN LECTURES ON FUNCTIONAL DERANGEMENTS OF THE LIVER DELIVERED AT THE ROYAL COLLEGE OF PHYSICIANS IN 1874. Ed. 3, 702 p., illus. London, Longmans, Green & Co.
Displacement, enlargement, and malformations of the liver are discussed as being due to tight lacing.
- (662) NEUSTÄTTER, O.
1903. DIE MÜNCHNER AUSSTELLUNG FÜR VERBESSERUNG DER FRAUENKLEIDUNG. [The Munich exhibition for the improvement of women's clothing.] München. Med. Wchnschr. 50: 2016-2017.
Discusses reform clothing and leaders in the reform movement. Author expresses wish that more physicians would

- (662) NEUSTÄTTER, O.—Continued.
work for dress reform. Historical sketch of the corset and discussion of the effects of tight lacing are included.
- (663) NOTTINGHAM, J.
1841-42. COMPRESSION OF THE FEMALE WAIST BY STAYS. *Prov. Med. and Surg. Jour.* [London] 3: 110-111.
Description of the internal condition of a woman who died of an abdominal disease due to tight lacing. The bony structure of the body had been modified and the visceral organs displaced.
- (664) NOYES, A. G.
1907. A PRACTICAL PROTEST AGAINST FASHION. *Independent* 63: 503-509, illus.
Advocates reform dresses.
- (665) OAKLEY.
1881. BEAUTY IN DRESS. 196 p. New York, Harper & Bros.
Deals chiefly with the artistic aspects of women's dress although the ill effects on the health of wearing tight corsets and shoes are discussed briefly.
- (666) O'FOLLOWELL, L.
1905. LE CORSET; HISTOIRE; MÉDECINE; HYGIÈNE. ÉTUDE HISTORIQUE... [The corset; history; medicine; hygiene. Historical study . . .] 222 p., illus. Paris, A. Maloine.
A history of the corset from the time of ancient Egypt to contemporary modes. Gives illustrations of the various stages of corsets, showing both the corset itself and the costume of the time. Touches on the struggles that have existed between the doctors and style makers, contemporary modifications, and the influence of contemporary medicine on these modifications.
- (667) ———.
1906. L'INFLUENCE DU CORSET SUR LES MUSCLES CHEZ L'ENFANT ET CHEZ LA JEUNE FILLE. [Influence of the corset on the muscles of the child and the young girl.] *Jour. Hyg.* [Paris] 31: 34-36.
Article on the dangers of the corset for the young. Its pressure and constriction prevent proper movement of the muscles. It thus deforms or hinders the development of the body, and increases the dangers of organic disorders.
- (668) ———.
1908. LE CORSET; HISTOIRE—MÉDECINE—HYGIÈNE. ÉTUDE MÉDICALE. . . [The corset; history—medicine—hygiene. Medical study. . .] 310 p., illus. Paris, A. Maloine.
Contains a large bibliography and is elaborately illustrated.
- (669) OPPLER-LEGBAUD, E.
1905. THE GERMAN DRESS REFORM MOVEMENT. *Independent* 59: 487-493, illus.
The author holds that German women should choose looser clothing more suited to their activities and tastes instead of following the French fashions.
- (670) PHELPS, E. S.
1873. WHAT TO WEAR? 92 p. Boston, James R. Osgood & Co.
A popular essay advocating reform in dress. Emphasizes that the dress of the day is ridiculous and has bad physical and moral effects. The bloomer as a type of reform dress is discussed.
- (671) PIERQUIN.
[n. d.] DES CORSETS SOUS LE RAPPORT DE L'HYGIÈNE ET DE LA COSMÉTIQUE. [Concerning corsets—their bearing on health and beautification.] 33 p. Bourges, A. Manceron.
A defense of the corset. The author attempts to prove that the corset is not injurious, but healthful as well as beautifying. The garment has been worn in civilized countries for centuries, and many benefits have resulted. In countries where the corset is not known, the women become deformed, hideous, and immoral.

(672) POCHHAMMER.

1902. LA RÉFORME DU COSTUME FÉMININ. [The reform of the feminine costume.] 2nd Cong. Internatl. Oeuvres et Institutions Féminines [Paris] 4: 210-220.

An address on clothing, dealing with the corset and its physiological and aesthetic evils, underclothing and its adaptation to modern needs and health, and the germ-carrying and movement-hindering character of the long skirt. Outlines a new movement for freedom in clothing and exhorts women to join it.

(673) ———.

1905. DIE ZUKUNFT DER FRAUENKLEIDUNG. [The future of women's clothes.] Ztschr. Krankenpflege 27: 477-482.

A lecture given before the commission for the improvement of clothing of the Society of National Hygiene at Berlin (formerly the Society for the Improvement of Women's Clothing). Traces the historical changes in woman's clothing and emphasizes that woman must learn to wear loose clothing.

(674) PORTER, J. L., and LEWIN, P.

1924. A SPECIAL CORSET FOR SOME BACK CONDITIONS. Jour. Amer. Med. Assoc. 82: 32, illus.

Reports a study of a new inconspicuous spinal support to be used in mild cases of back disorders. Shows several types of corsets.

(675) PROCTOR, R. A.

1882. CORSET-WEARING. Knowledge 2: 429-430.

General discussion of the bad effects of tight lacing. Refutes the arguments of other writers in the same journal favoring the wearing of corsets.

(676) ———.

1882. THE CORSET AS AN AID TO BEAUTY. Knowledge 2: 465-467, illus.
A continuation of 675.

(677) ———.

1882. STAYED WEAKNESS. Knowledge 2: 479-480.
A continuation of 676.

(678) ———.

1883. STAYS AND STRENGTH. Knowledge 3: 50-51.

General discussion upholding the author's view that corsets are harmful. He also disapproves of tight shoes and gloves.

(679) PURPLE, W. D.

1848. THE INFLUENCE OF DRESS IN THE PRODUCTION OF DISEASE IN FEMALES. 11 p. Albany, N. Y., Joel Munsell.

The author calls attention to the sensible dress of former times, satirizes the tightness and weight of women's clothing, and points out its unhygienic aspects.

(680) PUTNAM, N. W.

1922. VENTURES AND ADVENTURES IN DRESS REFORM. Sat. Evening Post 195 (Oct. 7): 15, 93-94, illus.

Popular humorous article in which the author ridicules the dress of both men and women in the various stages of its evolution and shows the need of reform clothing for women.

(681) RATIER, [F.]

1836. CORSET. ENCYCLOPÉDIE DES GENS DU MONDE. RÉPERTOIRE UNIVERSEL DES SCIENCES, DES LETTRES ET DES ARTS; AVEC DES NOTICES SUR LES PRINCIPALES FAMILLES HISTORIQUES ET SUR LES PERSONNAGES CÉLÈBRES, MORTS ET VIVANTS. [Paris] 7: 50-51.

Encyclopedic report giving definitions, descriptions, and uses of corsets. The effects of tight lacing are discussed.

(682) REED, B.

1899. DISPLACEMENTS AND DILATIONS OF THE ABDOMINAL ORGANS; THEIR RELATION TO FAULTY MODES OF DRESS, AND THEIR TREATMENT. Ther. Gaz. (3) 15: 581-586.

Tight lacing causes displacement of abdominal organs and a complication of ailments results. Mention is made of the possible ill effect of tightly buckled belts upon men.

- (683) RÉVEILLÉ-PARISE.
1841-42. HYGIÈNE DU CORSET. [Hygiene of the corset.] *Gaz. Méd. Paris* (2 s.) 9: 785-792. 1841. 10: 49-55, 145-155. 1842.
Series of letters written by a physician to the mother of a daughter who is at the age when corsets are first worn. Discusses the harmful effects of corsets in an effort to persuade the mother against permitting their use.
- (684) REYNOLDS, E., and LOVETT, R. W.
1909. THE INFLUENCE OF CORSETS AND HIGH-HEELED SHOES ON THE SYMPTOMS OF PELVIC AND STATIC DISORDERS. *Surg., Gynecol. and Obstet.* 8: 569-574. (Reviewed in *Amer. Jour. Obstet.* 59: 1027.)
Abstract report giving the general bad effect of corsets and high-heeled shoes on the internal organs from gynecological and orthopedic points of view.
- (685) ——— and LOVETT, R. W.
1910. AN EXPERIMENTAL STUDY OF CERTAIN PHASES OF CHRONIC BACKACHE. A COMBINED GYNECOLOGIC AND ORTHOPEDIC INVESTIGATION. *Jour. Amer. Med. Assoc.* 54: 1033-1043, illus.
The author concludes that backache is a mechanical disorder as a result of a loss of balance producing local strain in the lumbosacral region and in the posterior musculature. The experimental studies were concerned with the balance and modifications produced on balance by corsets and high-heeled shoes. High-heeled shoes tend to modify the position induced by corsets.
- (686) ROBIN, P.
1889. OBSERVATIONS SUR L'USAGE DU CORSET. [Observations on the use of the corset.] *Bul. Soc. Anthropol., Paris* (3) 12: 551-553.
The author compares the corset with the ancient mutilations of the savages. A general discussion is given which emphasizes that some types of corsets do not seem harmful while others cause various maladies and disorders.
- (687) ROSENBEACH.
1893. DER SCHÄDLICHE EINFLUSS DES CORSETS. [The dangerous influence of corsets.] *Frauenarzt* 8: 296-298, 346-351.
Discussion of injuries to the lungs, liver, stomach, and intestinal canal caused by the pressure of the corset.
- (688) ROTH, B.
1880. DRESS; ITS SANITARY ASPECT. 16 p., illus. London, J. & A. Churchill.
Deals principally with corsets and shoes though veils, belts, collars, and garters are discussed.
- (689) RUBNER, [M.]
1928. DIE MODERNE FRAUENKLEIDUNG. [The modern clothing of women.] *Deut. Med. Wchnschr.* 54: [379]-382. (Abstract in *Jour. Amer. Med. Assoc.* 90: 1306-1307.)
The author states that the mortality of women belonging to the 20 to 26 age group is increasing and that modern dress is at least partially responsible. The scanty clothing worn causes loss in body weight. Relative weights of women's clothing for summer and winter are given. Discusses uncleanliness of allowing the outer garment, which is less frequently cleaned, to touch such a large portion of the body. Believes modern footwear violates hygienic needs.
- (690) RUSSELL, F. E.
1892. A BRIEF SURVEY OF THE AMERICAN DRESS REFORM MOVEMENTS OF THE PAST, WITH VIEWS OF REPRESENTATIVE WOMEN. *Arena* 6: 325-339.
Interesting letters from outstanding women during the dress reform movement. Of historical interest.
- (691) ———.
1893. FREEDOM IN DRESS FOR WOMAN. *Arena* 8: 70-77.
Describes the reform dress movement being carried on under the auspices of the National Council of Women.

- (692) S., G. C.

1883. STAYS AND STATUES. Knowledge 3: 58-59.

A letter to the editor commenting on the views of another author (see 489 and 490) and declaring in favor of discarding corsets.

- (693) SAINT-OLIVE, P.

1861. ANTIQUITÉ DE L'USAGE DU CORSET. [Antiquity of the use of the corset.] Gaz. Méd. Lyon 13: 201-206.

Historical and general discussion of the corset and various abuses of some types.

- (694) SALLE, E. DE.

1825. NOTE SUR UNE MALADIE OCCASIONÉE PAR L'USAGE DES CORSETS. [Note on a malady caused by the use of corsets.] Jour. Complémentaire Dictionnaire Sci. Méd. 22: 41-45.

Reports a case in which the patient complains of pains in the left side which are particularly acute after eating. Infrequent pains also occur in the right side. The difficulty has been ameliorated but returns as soon as the corset is put on again.

- (695) SANGIOVANNI, R.

1910. THE ABOLITION OF THE CORSET AND DIETETIC EXPERIMENTS OF IMMUNIZED LEAN RAW MEAT AND ITS DERIVATIVES UPON THE CONSUMPTIVES. 16 p., illus. New York, Sisco & Sons.

Proposes to William J. Gaynor, mayor of the city of New York, a bill to prohibit the use of corsets by those employed in schools, shops, or factories.

- (696) SARGENT, D. A.

1889. THE PHYSICAL DEVELOPMENT OF WOMEN. Scribner's Mag. 5: [172]-185, illus.

Reports the difference in the heart action of 12 women when they ran 540 yards in loose gymnasium garments and when they ran the same distance while wearing corsets. The lung capacity, with and without tight clothing was also measured. The author believes that the accumulation of adipose below the waist is one of the results of wearing corsets.

- (697) SCHAECHKE.

1903. ZUR FRAGE DER REFORMKLEIDUNG. [On the question of reform clothing.] Ther. Monatsh. 17: 282-286.

An article provoked by the book of Paul Schultze-Naumburg. (See 703.) Discusses the harm of lacing due to perverted ideas of beauty and urges the medical world to awaken, take action, and find enthusiastic followers who will develop beautiful and healthy bodies by abandoning the corset.

- (698) SCHANZ, A.

1899. ZUR CORSETTFRAGE. . . [The corset question. . .] Deut. Med. Wchnschr. 25: 480-481.

The author believes that the correctly fitting corset is beneficial and should be included in the reform-clothing program. The corset allows a portion of the clothing weight to be supported by the hips, thus avoiding too great weight on the shoulders and preventing the round drooping shoulders often found in the corsetless figure.

- (699) SCHEIMBERG, H.

1920. HIGH HEELS AND BODY HEALTH. N. Y. Med. Jour. 111: 369-374, illus.

High heels interfere with normal posture and the proper functioning of the feet and the internal organs. They are the cause of backache, stooped shoulders, flat feet, and many other maladies.

- (700) SCHMITT, A. H.

1915. REMARKS ON THE ANATOMICAL AND PHYSIOLOGICAL BASIS OF AN ABDOMINAL SUPPORT OR CORSET FOR WOMEN. Amer. Med. 21: 908-910.

Discusses the abdominal anatomy of women and the need for a more ideal corset which will assist the muscles in their functions and give support to them.

(701) SCHNECK, J.

1892. SOME COMMON ERRORS IN THE PHYSICAL TRAINING, EDUCATION, AND DRESS OF GIRLS. Ill. State Med. Soc. Trans. 42: 424-439.

Points out that tight corsets hinder muscular development, and produce drooping shoulders and many abdominal disorders. High heels compel an unnatural posture which is injurious to health.

(702) SCHNEIDER.

1824. CORSETTE UND BLANCHETTE, EINE UNSERN SCHÖNEN BEI DER GEGENWÄRTIGEN MODE-EINRICHTUNG NACHTHEILIGE KLEIDERTRACHT, MEDIZINISCHE-POLIZEILICH BETRACHTET. [Corsets and paleness, our one beauty according to the modern tendency in dress fashion, medical policing considered.] In Henke, A., Ztschr. Staatsarzneikunde Jahrg. 4: [341]-360.

Harmful effects of improper corsets and tight lacing are considered. Suggestions are given for less dangerous corseting.

(703) SCHULTZE-NAUMBURG, P.

1922. DIE KULTUR DES WEIBLICHEN KÖRPERS ALS GRUNDLAGE DER FRAUENKLEIDUNG. [The culture of the feminine body as a basis for women's clothing.] 143 p., illus. Jena, Eugen Diederichs.

Considers the subject from the hygienic, anatomical, esthetic, and ethical standpoints. The author discusses in detail the anatomy of the feminine body and shows how the prevailing clothing is in variance to it. The ill effects of corsets and shoes are considered in particular. Includes 141 illustrations.

(704) SCHWENINGER.

1893. KORSET UND FRAUENZUKUNFT. [Corsets and the future of women.] Hygieia [Stuttgart] 6: 193-199.

Maintains that corsets oppose the laws of nature by causing injurious pressure on the breasts, stomach, back, and liver. As a result of wearing them, 80 to 90 per cent of women are in poor health and can not properly nourish their children. A degradation of the race is resulting.

(705) SEIFFERT, M.

1899. DIE KLEIDUNG DER AMERIKANERINNEN IN ALLGEMEINEN, UND DIE BERUFSTRACHT DER KRANKENPFLEGERINNEN IN BESONDEREN. [Clothing of American women in general and the uniform of hospital nurses especially.] Deut. Krankenpflege-Ztg. 2: [49]-52, 67-68, illus.

The uniform of American nurses is brought to the attention of nurses in Berlin and is discussed with approval. American women's clothing in general is considered favorably.

(706) SHEEHY, W. H.

1871. DEATH FROM TIGHT LACING, WITH POST MORTEM RESULTS, ETC. Lancet [London] 1871 (v. 1): 256.

Description of an autopsy after a death caused from tight lacing in which there was serious congestion in viscera and brain.

(707) SMITH, N. R.

1827. REMARKS ON THE INJURIES RESULTING FROM CONFINEMENT OF THE CHEST BY DRESS. Phila. Mo. Jour. Med. and Surg. 1: 5-11.

Discussion based on a dissection made at Jefferson College. The ribs of the patient were found to be deformed by lacing and the chest constricted by the clothing. These were held to be the cause of a case reported as pulmonary consumption.

(708) SMITH, W. W.

1888-89. CORSET-WEARING AND ITS PATHOLOGY. Sanit. Rec. (n. s.) 10: 201-203, 260-262, 323-323.

Detailed discussion opposing the use of corsets with emphasis on their deforming effects.

- (709) SMITH, W. W.—Continued.

1890. ON THE ALLEGED DIFFERENCE BETWEEN MALE AND FEMALE RESPIRATORY MOVEMENTS. *Brit. Med. Jour.* 1890 (v. 2): 843-844, illus.

Plates show stethographic tracings of the respiration of women wearing and not wearing corsets and of men. The results indicate that the differences observed were due to the constricting influence of the corset and not to a difference in the respiratory movements of the sexes.

- (710) SÖMMERRING, S. T.

1793. ÜBER DIE WIRKUNGEN DER SCHNÜRBRÜSTE. [Concerning the influence of corsets.] New ed., 84 p., illus. Berlin, Vossischen Buchhandlung.

Discussion of the harmful effects produced by wearing of tight corsets. A bibliography containing 92 references dating back to 1603 and dealing with the ill effects caused by corsets is appended. Of historical interest.

- (711) SOLOVIEFF.

1895. DE L'INFLUENCE DU COSTUME DES FEMMES SUR LEUR SANTÉ. [The influence of women's costumes on their health.] *Cong. Gynécol. Obstet. et Ped. Mém. et Discussions* 1895: 22-50, illus.

Address on the evils of the prevailing style. The evil effect of the corset upon respiration, circulation, muscular activity, and the abdominal organs, the carrying of germs by long skirts, and the harmful effects of high heels, are some of the subjects discussed. An outline of the history of clothing and a description of past and present reforms are included.

- (712) SPENER.

1897. ZUR VERBESSERUNG DER FRAUENKLEIDUNG. [The improvement of women's clothing.] *Allg. Med. Cent.-Ztg.* 66: 1172-1173.

An attempt to introduce reform clothing by teaching its importance and encouraging its adoption in women's colleges. The injuries caused by improper clothing are discussed.

- (713) ———

1897. UEBER VERBESSERUNGEN DER HEUTIGEN FRAUENTRACHT. [Concerning the modern improvements in woman's clothing.] *Deut. Med. Wchnschr.* 23: 13-14, illus.

Discussion of corsets and need for improvement in women's dress.

- (714) STAFFEL, F.

1922. EIN EIGENARTIGER STÜTZKORSETT-TYPUS. [A proper type of supporting corset.] *Ztschr. Orthopädische Chirurg.* 42: 5-11, illus.

Description of the supporting corset invented by the author. Its advantages are emphasized, and the disadvantages of ordinary types discussed.

- (715) STRATZ, C. H.

1904. DIE FRAUENKLEIDUNG UND IHRE NATÜRLICHE ENTWICKLUNG. [Woman's clothing and its natural development.] Aufl. 3, 403 p., illus. Stuttgart, Ferdinand Enke.

Discussion of the development of clothing and its influence on the feminine body. The dress of women of different nationalities and periods in history is considered. Illustrations showing the effect of clothing on the shape of the body are especially interesting.

- (716) SYMINGTON, J.

1892. NOTES ON THE EFFECTS OF TIGHT LACING UPON THE POSITION OF THE ABDOMINAL VISCERA. *Edinb. Med. Jour.* 37: 616-619.

An exact description of the physical condition of a woman of 50 years who had always laced tightly. The report is based on a dissection.

- (717) TALIAFERRO, V. H.

1873. THE CORSET IN ITS RELATION TO UTERINE DISEASES. *Atlanta Med. and Surg. Jour.* 10: 683-693, illus.

Specific cases are cited to show that the compression produced by corsets cause interference with the functions of

- (717) TALIAFERRO, V. H.—Continued.
digestion and respiration, loss of retentive power in abdominal walls, direct pressure upon and displacement of the uterus, and circulatory disturbances.
- (718) T[ARBELL], I. M.
1913. NINA WILCOX PUTNAM. *Amer. Mag.* 75 (7) : 34-36.
Describes Nina Wilcox Putnam's personal wardrobe which is based on reform fashions.
- (719) THIERSCH, J.
1900. EXPERIMENTELLE UNTERSUCHUNGEN ÜBER CORSETDRUCK. [Experimental investigation of corset pressure.] *Deut. Arch. Klin. Med.* 67: [559]-573, illus.
Reports an experimental study of the pressure exerted by several kinds of corsets on various parts of the body. Measurements were taken with both deep and shallow breathing. A detailed description of the apparatus used is given.
- (720) ———.
1900. UEBER CORSET UND REFORMKLEIDUNG. [Concerning the corset and reform clothing.] *München. Med. Wehnschr.* 47: 1108-1110.
Reports experiments conducted to determine the pressure caused at different points on the body by various corsets. The author contends that the corset causes a weakening of the back muscles, faulty ventilation and circulation, compression of thorax, displacement of small intestines, indigestion, and variations in the form of the liver and the stomach. Includes a discussion of an American-made reform corset as compared with reform corsets then in use.
- (721) ———.
1905. UEBER DIE REFORM DER FRAUENKLEIDUNG. [Reform of women's clothing.] *Med. Klinik* 1: 441-445, 469-474.
The author contends that reform clothing is a question of better underclothing and not outer clothing. Discussion is given of the ill effects resulting from tight lacing and the principles which should be embodied in a true reform movement.
- (722) THOMAS, T. G.
1891. A PRACTICAL TREATISE ON THE DISEASES OF WOMEN. Ed. 6, rev. by P. F. Mundé. 826 p., illus. Philadelphia, Lea Brothers & Co.
The chapter entitled "Improprieties of Dress" (p. 45-47) contains a detailed description of the direct effects of tight lacing on the organs.
- (723) THROCKMORTON, J.
1918. FASHIONS AS AFFECTING PUBLIC HEALTH. *Amer. Jour. Pub. Health* 8: 817-820.
The author deplores the lack of clothing worn by women in winter, and the injuries resulting from wearing the wrong kind of corsets and high-heeled, tight shoes.
- (724) TILLOTSON, M. E.
[1874.] PROGRESS VS. FASHION—AN ESSAY ON THE SANITARY AND SOCIAL INFLUENCES OF WOMAN'S DRESS. 31 p. [Vineland, N. J.]
The author stresses that women in every country should be freed from the burden of frills and streamers and should wear a hygienic costume, which need not sacrifice beauty to utility. The adoption of such a costume has become a hygienic and moral question.
- (725) TYLICKA.
1898. DU CORSET; SES MÉFAITS AU POINT DE VUE HYGIÉNIQUE ET PATHOLOGIQUE. [The corset, its ill effects from a hygienic and pathological point of view.] 71 p. Paris. (Thèse no. 77.)
Study of the effects of the corset on the health of women. The author contends that it causes circulatory and respiratory troubles, the deformation of the thorax, and nervous disorders. A history of the garment is included.

(726) VAISSETTE, P.

1875. *CONSIDÉRATIONS SUR L'USAGE PRÉMATURE ET ABUSIF DU CORSET*. [Considerations on the premature use and abuse of the corset.] 41 p. Paris. (Thèse no. 11.)

General discussion of the ill effects produced by the corset on the digestion, respiration, and circulation.

(727) VAN BIBBER, W. C.

1877. *SUPPLEMENTAL REPORT UPON THERAPEUTICS. I.—THE THERAPEUTICS OF PRESSURE, SOMATIC SUPPORT, AND MODES OF DRESS*. Med. and Chirurg. Faculty Md. Trans. 79: 98-103.

Discussion of pressure both properly and improperly applied to the body. Several cases of tumor are cited in which pressure produced curative effects. The author contends that the ordinary woman's corset causes harm by improper pressure. Mention is made of the ills of tight belts and tight shoes.

(728) VAN DEUSEN, E. G.

1928. *MODERN CORSETING*. Mo. Agr. Col. Ext. Circ. 201, 4 p., illus. Gives the essential characteristics of a satisfactory corset and describes correct corsets for different figures. Directions are included for fitting and adjusting the corset.

(729) WALSH, W. H.

1853. *NOTE ON THE BREATHING-MOVEMENTS IN THE TWO SEXES AND ON THE ALLEGED INFLUENCE OF STAYS IN PRODUCING PULMONARY CONSUMPTION*. Med. Times and Gaz. [London] 6: 366-368.

The author maintains that women and men should breathe alike, but corset stays prevent abdominal breathing. No statistics are available proving that corsets cause consumption.

(730) WEBER, F. P.

1925. *TWO DISEASES DUE TO FASHION IN CLOTHING: CHLOROSIS AND CHRONIC ERYTHEMA OF THE LEGS*. Brit. Med. Jour. 1925 (v. 1): 960-962.

Chlorosis, present in the days of tight corsets, has been replaced by chronic erythema of the legs, which is attributed to the overexposure of the legs in cold climates.

(731) WELLS, F.

1905. *REPORT OF COMMITTEE ON HYGIENE OF DRESS*. Amer. Pub. Health Assoc. Rpt. 30: 153-159.

Discusses advantages and disadvantages of modern clothing. Points to the unhealthful attire of women, with statements of opinion by several authorities. Maintains that education must be relied upon as the chief remedy of existing conditions.

(732) WEST, C. C.

1909. *THE USE AND ABUSE OF THE CORSET*. . . Delineator 74: 220.

Claims that a correctly fitting corset is a benefit in supporting the abdominal muscles.

(733) WEST, G. R.

1892. *THE CORSET AS A FACTOR IN PELVIC DISEASES*. Tenn. Med. Soc. Trans. 1892: 208-214; Amer. Gynecol. Jour. 2: 497-502.

The author contends that the habitual use of the corset causes injuries to osseous system, thorax, abdomen, and pelvis, and should be discarded entirely.

(734) WHITING, W. J.

1916. *SKIRTS OR WHAT?* Outing 69: 30-33, illus.

Knickerbockers are recommended for women's sports costume.

(735) WILDE, H.

1922. *THE FOOT FACTOR IN THE FUTURE OF WOMEN*. Nation's Health 4: 520-524, illus.

Discusses the structure of the feet and the effect on them of improper posture and shoes. The author believes that the introduction of a hygienic shoe into fashion is up to the women themselves.

- (736) WILHELM, F.
1900. ÜBER FRAUENBEKLEIDUNGSREFORM. [Reform of women's clothes.] *Frauenarzt* 15: 198-200, 245-248.
Emphasizes the importance of a dress reform. Discusses the harmful effects of corsets and tight bands about the waist.
- (737) WILKINS, T.
1890. PELVIC CONGESTION FROM MODERATE COMPRESSION OF THE WAIST. *South. Calif. Practitioner* 5: 133-139.
Discourages any kind of compression at the waist.
- (738) WILLIAMS, W.
1892. CHLOROSIS. *Liverpool Med.-Chirurg. Jour.* 12: [29]-37.
Symptoms and possible causes of chlorosis are listed. The author concludes from the evidence exhibited in his patients that tight lacing causes chlorosis. A physiological explanation is offered.
- (739) ———.
1902. A GLIMPSE AT SOME OF THE DEFORMITIES AND DISEASES OF WOMEN THAT ARE DUE TO THEIR CLOTHING. *Med. Surg. and Path. Rpts. Roy. South. Hosp. [Liverpool]* 1901: [61]-72, illus.
Attributes curvature of the spine, the "ewe-neck," and lack of muscular development in women to their tight clothing.
- (740) ———.
1903. SOME REMARKS ON CHLOROSIS. *Med. Press and Circ.* (n. s.) 75: 638-641.
Description of the causes and symptoms of chlorosis with citation of specific cases. Tight clothing of women is held responsible for much of this.
- (741) ———.
1916. DEFORMITIES AND DISEASES OF WOMEN DUE TO THEIR CLOTHING. *Clin. Jour. [London]* 45: 337-340, illus.
The natural braces waste away when the corset takes their place. The use of tight stays causes curved backs, concave necks, contraction of the base of chest, and chest breathing. It deforms the bones and cripples the muscles.
- (742) WILLIAMS, W. M.
1885. THE PHILOSOPHY OF CLOTHING. XVIII.—CORSETS AND FEMALE FASHIONS. *Knowledge* 8: 327-329.
Decries the evils of tight lacing and heavy skirts, and urges that women's clothing be designed in accordance with fixed principles of good taste and suitability to occupation and means.
- (743) WIMMER, S. J.
1888. IMPROPRIETIES OF DRESS AN IMPORTANT ETIOLOGICAL FACTOR IN MANY OF THE DISEASES PECULIAR TO WOMEN. *Med. Register [Philadelphia]* 4: 486-488.
A discussion of the different injuries which can be caused by the wearing of tight corsets.
- (744) WINSLOW.
1747. SUR LES MAUVAIS EFFETS DE L'USAGE DES CORPS À BALEINE. [Concerning the bad effects of the use of whalebone substances.] *Hist. Acad. Sci. [Paris]* 1741: 76-80.
General discussion of the bad effects of corsets. They compress the internal organs, hinder their action, and deform the bone structure.
- (745) WITTHAUER, K.
1901. CORSET UND LEIBBINDE. [Corset and waistbands.] *Ther. Monatsh.* 15: 224-231, illus.
Reports that there is no doubt as to the injurious effect of corsets and that their relation to chlorosis, gastroptosis, and abdominal complaints of women is gradually becoming recognized. Tight bands need the foundation of the corset if they are to be supported. A criticism of four illustrated types of reform corsets is given.

(746) Wood, C. A.

1896. THE WEARING OF VEILS, AND ITS EFFECTS UPON THE EYESIGHT. Boston Med. and Surg. Jour. 135: 564-565.

Report of an experiment testing the effect of eleven types of veils on the eyesight. Veils cause eye strain, though it may not be apparent at the time they are worn unless the eyes are already weak.

(747) Woolson, A. G.

1874. DRESS REFORMS: A SERIES OF LECTURES DELIVERED IN BOSTON ON DRESS AS IT AFFECTS THE HEALTH OF WOMEN. 263 p., illus. Boston, Roberts Bros.

Lectures, with one exception, by women physicians designed to arouse women to a knowledge of physical laws, to show them how their dress defies these laws, and to suggest suitable garments.

(748) Young, S. C.

1860. THE EVILS ARISING FROM TIGHT LACING. New Orleans Med. and Surg. Jour. 17: 309-314.

Discusses the harmful effects of tight lacing upon the spinal column, ribs, lungs, heart, brain, liver, stomach, intestines, bladder, and uterus. Warns men and boys to wear loose trousers and suspenders instead of belts.

(749) Zinn, W.

1900. UEBER DIE ENTSTEHUNG VON VITILIGO DURCH DRUCK. [Concerning the origin of vitiligo by pressure.] Charité-Ann. 25: 112-116.

Five cases of vitiligo are described. Three cases are ascribed to wearing trusses, one to a corset, and one to carrying a heavy load. The conclusion that vitiligo may be caused by constant pressure is supported by several references to the literature.

PSYCHOLOGICAL ASPECTS

(750) ANONYMOUS.

1887. THE PHILOSOPHY OF TIGHT-LACING. Sat. Rev. 64: 816-817.

Discusses whether tight lacing is done in an effort to acquire better proportion in the human figure, to appear more youthful, or to attract the admiration of men.

(751) ———.

1920. THE BENEFICENT INFLUENCE OF THE WORKMAN'S SILK SHIRT. Lit. Digest 65 (7): 62, 65.

Taken from an article in "The union." The silk shirt gives the workman self-respect and tends to raise his social status. "A man in a silk shirt will not throw bricks."

(752) ———.

1921. IS THE YOUNGER GENERATION IN PERIL? Lit. Digest 69 (7): [9]-12. 58, illus.

A résumé of press accounts reporting the attempts of churches, legislatures, and various organizations to combat the tendency of girls to wear immodest clothing. Opinions of editors and writers are quoted.

(753) ———.

1924. THE CATHOLIC CRUSADE FOR MODESTY. Lit. Digest 82 (9): [25]-26, illus.

Pope Pius XI has taken a definite stand for the reform of women's immodest clothing and has decreed that communion will be refused women who dress immodestly. The reform is to be undertaken by Catholic women's organizations.

(754) Atkinson, J. B.

1880-81. THE INFLUENCE OF ART IN DAILY LIFE. V.—DRESS. Good Words [London] 21: 777-784; Appleton's Jour. 25: 37-43.

An article stressing the psychology of dress. A person wearing ugly dress does an injustice to himself and an injury to others. There should be distinct clothing for each sex, just as nature put indicative marks upon the sexes of all animals.

- (755) BLISS, S. H.
1916. THE SIGNIFICANCE OF CLOTHES. *Amer. Jour. Psychol.* 27: [217]-226.
General discussion of the origin of clothes.
- (756) BRADLEY, H. D.
1922. THE ETERNAL MASQUERADE. 208 p. London, T. W. Laurie (Ltd.).
Discusses the history of costume of various ages, from a philosophical and psychological angle.
- (757) DEARBORN, G. V. N.
1918. PSYCHOLOGY OF CLOTHING. 72 p., illus. Princeton, N. J., and Lancaster, Pa., Psychological Review Co. (*Psychol. Rev.* Pub. v. 26, no. 1, whole no. 112.)
Includes sections on the effect of clothes on the mind and development of the wearer. The author discusses clothes consciousness, texture and weave of fabrics, and clothes fitness and personality.
- (758) DUNLAP, K.
1928. THE DEVELOPMENT AND FUNCTION OF CLOTHING. *Jour. Gen. Psychol.* 1: [64]-78.
Discussion of the four important theories explaining the origin of clothing: namely, modesty, immodesty, adornment, and utility or protection.
- (759) ELSTER, A.
1923. KLEIDUNG UND MODE. [Clothing and fashion.] (In Marcuse, M. Handwörterbuch der Sexualwissenschaft Enzyklopädie der natur- und kulturwissenschaftlichen Sexualkunde des Menschen. p. 263-267. Bonn, A. Marcus & E. Webers.)
Discusses the sexual significance of clothing and fashion.
- (760) FLACCUS, L. W.
1906. REMARKS ON THE PSYCHOLOGY OF CLOTHES. *Pedag. Seminary* 13: [61]-83.
Analysis of 181 answers to a questionnaire drawn up by G. Stanley Hall on some of the psychological aspects of clothing. Questions were asked regarding changes in self-feeling and personality caused by wearing different types of clothing and fabrics. Ten possible research problems on the subject are suggested.
- (761) HALL, G. S.
1897-98. SOME ASPECTS OF THE EARLY SENSE OF SELF. *Amer. Jour. Psychol.* 9: [351]-395.
Discussion of the effect of finery and good clothes as well as their fit, flexibility, and pressure upon the individual. Dress and adornment are elements in a child's consciousness not usually included as a factor of ego. The comfort of clean clothes and the sensitiveness to texture and thickness are considered.
- (762) ——— and SMITH, T. L.
1903. SHOWING OFF AND BASHFULNESS AS PHASES OF SELF-CONSCIOUSNESS. *Pedag. Seminary* 10: [159]-199.
A portion of the discussion is devoted to such effects of clothes upon consciousness as showing off, mortification, antagonisms, and blushing.
- (763) JAEGER, G.
1892. STOFFWIRKUNG IN LEBEWESEN. GRUNDGESETZLICHES FÜR LEBENSLEHRE UND LEBENSPRAXIS. [Effect of material upon the way of living. Fundamental laws for the teaching and practice of living.] 260 p. Leipzig, E. Günther.
Philosophical discussion elaborating the author's theories concerning the effect of textiles upon the physical and spiritual health of persons wearing them.
- (764) KENNEDY, H. A. S.
1926. SHORT SKIRTS. *Forum* 75: [829]-836.
The idea of immorality is closely allied to the idea of shame. By getting away from shame, moral health has risen to a higher plane than prevailed in Jane Austen's day when woman's preoccupation was sex.

- (765) KIRKLAND, W.

1904. MY CLOTHES. Atlantic Mo. 94: 359-365.

In an essay, the writer describes the development of her clothes interest, beginning with infancy. She believes that personality is very closely allied with dress.

- (766) LOTZE, H.

1885. MICROCOSMUS: AN ESSAY CONCERNING MAN AND HIS RELATION TO THE WORLD. Translated from German by E. Hamilton and E. E. C. Jones. 2 v. Edinburgh, T. & T. Clark.

The psychology of dress is treated in 1: 590-596. The author discusses the effect of hats, high heels, flowing robes, corsets, tight belts, and girdles on the mind and actions of the wearer.

- (767) McDONALD, F.

1887. THE INFLUENCE OF DRESS UPON DEVELOPMENT. Open Court 1: 408-410.

The author believes dress to be the outward expression of self. Radicals dress to attract people to their difference in motives. Where rigid discipline is necessary as in the case of military life, a uniform suppresses individually in favor of the community. The unbecoming dress of reformatories has a deteriorating effect, whereas the habit of the monk impresses him with his own piety.

- (768) McMURTRIE, D. C.

1913. FIGURES CHARACTERISTICS IN THE FEMALE AS FACTORS IN SEXUAL ALLUREMENTS—THE INFLUENCE OF THE CORSET. Lancet-Clinic [Cincinnati] 110: 171-174.

The desire to be sexually alluring has caused women to wear tight corsets in order to accentuate the breasts and hips. In so confining themselves they have broken in health.

- (769) MORTON, G. M.

1926. PSYCHOLOGY OF DRESS. Jour. Home Econ. 18: 584-586.

A study of the effect of clothes on personality. The author divides women into two classes (1) stately and striking and (2) dainty and petite, and cites two instances in which a change in clothing made a great change in the manners and personality of the individual.

- (770) NASH, A. M.

1910. THE EFFECT OF CLOTHING UPON THE MINDS OF CHILDREN. Training School 7: 216-219.

A teacher in a school for feeble-minded children relates some observations she has made which have convinced her that children are better mannered and happier in attractive clothing.

- (771) PARSONS, F. A.

1923 THE PSYCHOLOGY OF DRESS. 358 p., illus. Garden City, N. Y., Doubleday, Page & Co.

Discusses the costumes worn by European and American men and women during different periods of the world's history.

- (772) PATTEN, S. N.

1913. THE STANDARDIZATION OF FAMILY LIFE. Ann. Amer. Acad. Polit. and Social Sci. 48: 81-90.

Discussion of the economic and social aspect of dress. The ornamented and highly colored dress which accents the body is classed as sexual; and simple, dull clothing, accenting the face, is termed the spiritual type.

- (773) RAMSDEN, G.

1900. EXTRAVAGANCE IN DRESS. Nineteenth Cent. 48: 755-763.

Discusses the effect of fashion on the morals of women and on the economic conditions of the country.

- (774) REID, E. L.
1925. WHY CHILDREN ARE CROSS. *Hygeia* [Chicago] 3: 384-386.
Contents that the irritability of infants and children is often due to uncomfortable and ill-fitting clothing.
- (775) SANBORN, H. C.
1926. THE FUNCTION OF CLOTHING AND OF BODILY ADORNMENT. *Amer. Jour. Psychol.* 38: [1]-20.
Discusses clothing and its relation to modesty and sex. States that perhaps clothing originated for the purpose of adornment and protection from cold. Advocates changes in men's clothing to conform with the new freedom in women's.
- (776) STARR, F.
1891. DRESS AND ADORNMENT. . . . *Pop. Sci. Mo.* 39: 488-502, 787-801, illus.
Discussion under the headings of deformation, dress, ornament, and religious dress. The desire for protection and ornament and a feeling of shame are the motives prompting dress.
- (777) SUMNER, W. G.
1907. *FOLKWAYS*. 692 p. Boston, Ginn & Co.
This study of the sociological importance of usages, manners, customs, mores, and morals includes a consideration of dress, chiefly from a psychological and philosophical viewpoint.
- (778) TALMEY, B. S.
1918. THE PSYCHOLOGY AND GENESIS OF FEMALE CLOTHES: A PSYCHOSEXUAL STUDY. *Amer. Med.* (n. s. 13) 24: 203-214.
History of the development of clothing by examination of the psychology of the phases of sex attraction. A woman tries to adorn her body beyond that of other females in order to attract men. Fashion is merely serving the dictates of sex attraction.
- (779) THOMAS, W. I.
1899. THE PSYCHOLOGY AND MODESTY OF CLOTHING. *Amer. Jour. Sociol.* 5: 246-262.
A study of the conditions in race history that have centered the attention on the sex organs and the forms of attention which were favorable to the development of clothing. Such subjects as primitive initiation ceremonies, spirit interest, protection, and the showing-off instinct are considered.
- (780) WHATHAM, A. E.
1919. MODESTY AND THE MODERN WOMAN. *Amer. Jour. Urology and Sexology* 15: [289]-293.
The author objects to the change in women's dress after the war. He bases his contentions on the grounds of decency and morals.
- (781) WILKINSON, M.
1914. RELATION OF CLOTHES TO THE BODY. *Craftsman* 26: 122.
Discusses art and hygiene in dress as a means of expressing personality, producing morality, and encouraging individuality.
- (782) WILLIAMS, E. H.
1914. THE SEXUAL SIGNIFICANCE OF RECENT FASHIONS. *Med. Rec.* [New York] 86: 874-877.
Suggests reasons for some of the unhygienic fashions followed by women. Attributes the adoption of the hobble and diaphanous skirt and exposed hosiery to the altered condition in the country's sexual balance. Modern living conditions have lessened the sexual desire of men and increased women's impulses. As a result men have gradually discarded garments worn chiefly for display, whereas women have inclined toward more suggestive clothing.

EFFECT OF CLOTHING FABRICS ON HEALTH

GENERAL

(783) ANONYMOUS.

1877. UNSERE KLEIDER. I. DAS HEMDE. [Our clothing. I. The chemise.] Bl. Gsundhtspflege 6: 38-40, 57-58.

Compares the hygienic value of wool, cotton, and linen as underwear materials. Wool is recommended for older people and cotton for children.

(784) BAKER, C. G.

1916. CLOTHES AND THE BODY. Jour. Home Econ. 8: 320-323.

General discussion of the function of clothing and the physical properties affecting hygienic value.

(785) BARKER, S. G.

1929. SOME SCIENTIFIC ASPECTS OF WOOL AS THEY AFFECT THE WEARER. Jour. Soc. Dyers and Colourists 45: 77-81.

Considers such physical properties of wool as specific gravity, moisture absorption, thermal conductivity, tensile strength, and elasticity.

(786) BASSENGE, R.

1904. UEBER EINE EINFACHE METHODE ZUR PRÜFUNG DER ZWECKMÄSSIGKEIT TROPISCHER UNTERKLEIDUNGEN. [A simple method for testing the suitability of tropical underclothing.] Deut. Med. Wehnschr. 30: 635-636.

Clothed in underwear only, a subject was given a sweat bath for 20 minutes. Observations were made on the time of beginning of perspiration, weight of clothing before and after, pulse rate, body weight, comfort, and behavior of body temperature. The results indicate that loosely woven cotton jersey is more suitable than silk.

(787) BEDFORD, T.

1928. SOME EFFECTS OF ATMOSPHERIC CONDITIONS ON THE INDUSTRIAL WORKER. Jour. Indus. Hyg. 10: 364-390, illus.

A summary of work on this subject. The effect of clothing is among the factors considered.

(788) BERGONIÉ, J.

1903. METHODES ET APPAREILS POUR LA DÉTERMINATION DES CONSTANTES PHYSIQUES DES ÉTOFFES À VÊTEMENT. [Methods and apparatus for determining physical constants of clothing materials.] Assoc. Franç. l'Avanc. Sci. 31^e Sess. Cong. et Montauban 1902. Notes et Mem. pt. 2: 355-359.

States that the principal functions of clothing are to conserve heat in winter and permit evaporation of perspiration in summer. Theoretical discussion and description of methods and apparatus used to determine the heat resistance of fabrics and their permeability to gaseous substances.

(789) BUCHNER, H.

1896-97. ZUR HYGIENE DER KLEIDUNG. [Hygiene of clothing.] München. Med. Wehnschr. 43: 611-615; Sitzber. Aerztl. Vereins München (1896) 6: 72-86. 1897.

A review of Rubner's work.

(790) CATON, F.

1921. THE HYGIENE OF WOMEN'S UNDERWEAR. Jour. Home Econ. 13: 252-255.

Experimental data on the rate of water absorption and evaporation and the heat conductance of certain hosiery and other fabrics. Does not refer exclusively to underwear or to women's garments.

(791) CHELIUS, O. H. F.

1891. ÜBER ZERSETZUNGEN IN DER KLEIDUNG. [Decomposition in clothing.] 26 p. Marburg. (Inaug. Diss.)

Study of the influence of different fabrics on decomposition taking place in clothing due to perspiration. The author measured the ammonia and sodium chloride content of stockings and compared cotton with linen, "reformbaumwolle," silk, and wool.

- (792) COOK, J. N.
1900. LECTURES ON HYGIENE. IX. CLOTHING. *Indian Med. Rec.* 19: [179].
Gives briefly the properties of cotton, linen, wool, and silk fabrics for clothing, chiefly as regards heat conductivity and absorption of water. Advice is given on the selection of fabrics with reference to protection against cold, cold winds, and heat, and to absorption of perspiration and odors.
- (793) COULIER.
1858. HYGIÈNE DU SOLDAT.—EXPÉRIENCES SUR LES ÉTOFFES QUI SERVENT À CONFECTIONNER LES VÊTEMENTS MILITAIRES. [Hygiene of the soldier.—Tests on materials which are used in the manufacture of military garments.] *Gaz. Hebd. Méd. et Chirurg.* 5: 189-193, 221-224.
Materials used for military clothing were tested experimentally relative to their absorption of water and their protection against cold and excessive heat.
- (794) DANIELS, F. H.
1892. HYGIENIC CLOTHING. *N. Y. Med. Jour.* 55: 464-466.
The author advocates Jaros hygienic underwear the fabric of which is made by catching unspun wool into the mesh of a loosely knitted cotton back so that instead of the usual longitudinal weave, the ends are in contact with the skin. The material is very porous and hygroscopic.
- (795) FITZ, G. W.
1914. THE PHYSIOLOGIC COST OF INSUFFICIENT PROTECTIVE CLOTHING. *Boston Med. and Surg. Jour.* 170: 648-651.
Discussion from a physician's point of view of the physical properties of desirable clothing. Scientific investigations, especially those of Rubner, are considered. The results gathered by a questionnaire on the influence of clothing on health sent to several hundred physicians, and a list of diseases attributed to improper clothing, are given.
- (796) FRIEDBERGER, E.
1928. ZUR HYGIENE DES TÄGLICHEN LEBENS. III. MITTEILUNG. UEBER DIE WINTERKLEIDUNG VON MANN UND FRAU SOWIE ÜBER DIE DURCHLÄSSIGKEIT DER KLEIDERSTOFFE UND KLEIDER FÜR LICHT UND LUFT. [On the hygiene of daily life. Part 3. Concerning the winter clothing of man and woman as well as the permeability of clothing materials and clothing to light and air.] *Deut. Med. Wehnschr.* 54: 947-951. (Abstract in *Jour. Amer. Med. Assoc.* 91: 526.)
The author compares the modern clothing of men and women. He considers women's clothing more ideal on account of its greater comfort and permeability to light and air. The weight of clothing and temperature and humidity under the clothing of a man and a woman are contrasted. The importance of allowing the body access to light and air is particularly emphasized. The author summarizes much of the data available on this subject.
- (797) GARRETT, A. E.
1913. THE HYGIENIC ASPECT OF THE PHYSICAL PROPERTIES OF THE CHIEF TEXTILE FIBRES. *Jour. Roy. Sanit. Inst.* 34: 409-416.
Discussion of the heat conductivity, absorption of moisture, porosity, color, friction, and inflammability of animal and vegetable fibers. Simple experiments to illustrate differences in thermal conductivity and in air permeability are described. Animal fibers are considered better for clothing.
- (798) HAMMOND, W. A.
1863. A TREATISE ON HYGIENE WITH SPECIAL REFERENCE TO THE MILITARY SERVICE. 604 p., illus. Philadelphia, J. B. Lippincott & Co.
Clothing is discussed in Chapter 28, p. 579-590. Tests carried out by the author repeat and confirm the work of Coulier. (See 793.) Chapter 29 is on the hygienic relations of clothing with the several parts of the body.

(799) HIBBERD, J. F.

1890. CLOTHING IN ITS RELATION TO HYGIENE. Amer. Pub. Health Assoc., Pub. Health Papers and Rpts. (1889) 15: [94]-100; Sanitarian 24: 139-147.

Importance of proper clothing with respect to the functions of the skin is stressed. Overdressing enervates the skin and thereby weakens resistance to disease. Proper exposure of the skin to low temperatures is advocated as a general tonic.

(800) HILL, L.

1925. SUNSHINE AND OPEN AIR. Ed. 2, 132 p., illus. London, Edward Arnold & Co.

The following subjects related to clothing are considered: Absorption of moisture by clothing and resulting loss of heat-retaining power, page 22; reflection, absorption, and transmission of sunlight, pages 83 and 125; physiological effects, especially dangers of overclothing, effect of texture, and selection of clothing for different climates, pages 120-125.

(801) ——— and CAMPBELL, A.

1925. HEALTH AND ENVIRONMENT. 208 p., illus. New York, Longmans, Green & Co., and London, Edward Arnold & Co.

In Chapter 4 entitled "Concerning Clothes," the following subjects are considered: Properties and functions of clothing materials, namely, heat-retaining powers, permeability to wind, source of irritation, involution of heat, protection against mechanical forces, protection against insolation, reduction of emission of radiant heat from the skin, protection against wetting; kata-thermometric observations demonstrating the properties of clothing materials; climate and clothes; clothing for excessively cold conditions; and clothing for excessively hot conditions.

(802) INABA, R., and MOMOSE, G.

1911. HYGIENISCHE STUDIEN ÜBER DIE BEKLEIDUNGSTOFFE IN DER JAPANISCHEN ARMEE. 1. UEBER PHYSIKALISCHE EIGENSCHAFTEN DER BEKLEIDUNGSTOFFE. [Hygienic studies of the clothing materials in the Japanese Army. 1. On the physical characteristics of clothing materials.] Ztschr. Militärärzte [Tokyo] 1911 (24): 17-18.

Determinations of such physical properties as elasticity, permeability, and moisture content are reported for each of 34 fabrics used by the Japanese Army at that time.

(803) JAEGER, E.

1926. ZUR HYGIENE DER KLEIDUNG. [The hygiene of clothing.] Med. Klinik 22 (Pt. 2): 1908-1909.

Comparison of the physical properties of cotton, wool, and linen relative to their effect on the natural functions of the skin. Proper clothing should be permeable to air, provide for easy evaporation of perspiration, and be a poor heat conductor.

(804) LANGE, S. J. DE.

1904. UNTERSUCHUNGEN ÜBER EINIGE PHYSIKALISCHE EIGENSCHAFTEN VON 50 KLEIDUNGSTOFFEN, MIT BESONDERER RÜCKSICHT AUF DIE PERMEABILITÄT IN FEUCHTEM ZUSTANDE. [An investigation of some of the physical properties of 50 clothing materials with particular reference to their permeability in a damp state.] Arch. Hyg. 51: [221]-244, illus.

General discussion of important physical properties and their measurement. A new method is given for determining the permeability to air. Data on permeability to air and pore volume of the 50 materials are tabulated.

(805) LASCHTSCHENKO, P.

1895. UEBER PRODUKTE AUS SOGEN. WALDWOLLE. [Products from so-called "forest wool."] Arch. Hyg. 33: [193]-205.

So-called forest wool is made from pine and fir needles which after proper treatment are mixed with wool, cotton, or wool and cotton. The physical properties, including the heat conductivity of such fabrics, were studied.

(806) LEHMANN, K. B.

1907. VERGLEICHENDE UNTERSUCHUNGEN ÜBER DIE HYGIENISCHEN UND TECHNISCHEN EIGENSCHAFTEN GLATTER WEISSEN LEINWAND UND BAUMWOLLEWEBE. [Comparative investigations of the hygienic and technical properties of smooth white linen and cotton cloth.] Arch. Hyg. 60: [191]-260, illus.

Comparative study of chemical reactions, physical properties, and microscopic and macroscopic thread structure of smooth, white linen and cotton cloth. Experimental data are given on the physical properties, the absorption of water vapor and of water, adhesion of wet cloth to the skin, resistance to wear and tear, pore size, air permeability of dry and moist finished and washed fabrics, heat conductivity, absorption of ammonia, and taking up of dirt and bacteria. Fifty-two references are included.

(807) LEWIS, A.

1881. HOW TO LIVE IN WINTER. 84 p. New York, Food and Health Publishing Office.

Part 4 deals with the protective power of dress. In choosing materials, heat conduction, light absorption, permeability to water, and ventilation are to be considered.

(808) MCGOWAN, F. R., and SALE, P. D.

1923. HEAT RETAINING PROPERTY OF FABRICS. Textile World 63: 2607, 2609, 3041, 3043. illus.

Preliminary report describing apparatus constructed by the Bureau of Standards, United States Department of Commerce, for determining heat transmission, air permeability, and hygroscopic properties of blanket materials. The problems and possible scope of the work are outlined.

(809) MAYER, A.

1906. DAS VERHALTEN DER VERSCHIEDENEN BEKLEIDUNGSTOFFE GEGEN WÄRME UND FEUCHTIGKEIT. [The behavior of different clothing materials toward heat and moisture.] Bl. Volksgesundheitspflege 6: 2-7.

Reports simple tests on the heat conductivity and absorption and evaporation of water by wool, linen, cotton, and silk fabrics of several weaves.

(810) MERCK, W., MERCK, L., MERCK, E. A., and MERCK, C. E.

1907. NEW OR IMPROVED MANUFACTURE OF HYGIENIC TEXTILE FABRICS. Jour. Soc. Dyers and Colourists 23: 215.

Reports an English patent for a woolen fabric with which methylene ditannin has been combined. The action of perspiration upon this liberates tannin and formaldehyde so that the fabric has an astringent and disinfecting action on the skin.

(811) NOCHT.

1889. VERGLEICHENDE UNTERSUCHUNGEN ÜBER VERSCHIEDENE, ZU UNTERKLEIDERN VERWENDETE STOFFE. [Comparative investigations of different materials used for underwear.] Ztschr. Hyg. 5: [73]-97, illus.

The rates of cooling of warm bodies wrapped with underclothing materials made of cotton, wool, and linen were compared by the Krieger method. The wetting capacity and hygroscopicity of the different materials, and the permeability to air were also studied. Description and diagram of the apparatus for studying air permeability are given.

(812) PAULSEN, O.

1885. DIE JÄGERSCHE WOLLEKLEIDUNG UND IHRE BEDEUTUNG FÜR DIE GESUNDHEIT. . . [Jaeger clothing and its relation to health.] 48 p. Hamburg. O. Meissner.

Material is brought together which the author believes demonstrates the unusual value of woolen fabrics for giving health and comfort. He advocates this fiber for day and night clothing for infants and adults as well as for bedding. Some experimental data giving physical properties of fabrics are included. The author agrees with Jaeger as to the value of woolen clothing, but repudiates some of his ideas on the subject.

- (813) PETTENKOFER, M.

1865. UEBER DIE FUNKTION DER KLEIDER. [The function of clothing.] Ztschr. Biol. 1: [180]-194.

One of the earliest scientific investigations of the relation of physical properties of clothing to hygiene. The hygroscopic properties of linen and flannel were compared and the effect of temperature and humidity considered. The air permeability of linen, flannel, buckskin, chamois, kid, and silk was determined. The relation of air permeability and hygroscopic properties to warmth are discussed.

- (814) ———.

1873. THE RELATIONS OF THE AIR TO THE CLOTHES WE WEAR, THE HOUSE WE LIVE IN, AND THE SOIL WE DWELL ON. Abridged and translated by Augustus Hess. 94 p., illus. London, N. Trübner & Co. (First section reprinted in Pop. Sci. Mo. 10: 654-675, 1877, under the title, "Relations of the air to our clothing.")

Three popular lectures. The first deals with the function of clothing in the interest of heat economy of the body. The author's and also Krieger's work on the physical properties of textile fabrics, namely, heat conductivity, air permeability, and water absorption, are discussed. In connection with the heat economy of the body, the importance of the bed as night clothing is stressed.

- (815) PHALEN, J. M.

1910. AN EXPERIMENT WITH ORANGE-RED UNDERWEAR. Philippine Jour. Sci. (B) 5: 525-546. (Reviewed in Jour. Amer. Med. Assoc. 54: 1793. 1910.)

Comparison of the physiological effects of orange-red and white underwear in the Philippines. It is concluded that the former adds to the burden of heat upon the system, and although it protects against the chemical rays, the latter is of comparatively little moment.

- (816) REICHENBACH, H.

1894. UEBER DEN GEGENWÄRTIGEN STAND UNSERER KENNTNISS VON DEN PHYSIKALISCHEN EIGENSCHAFTEN DER KLEIDUNG. [The present state of our knowledge of the physical properties of clothing.] Hyg. Rundschau 4: [1057]-1067, 1106-1117.

Review of literature on behavior of clothing toward water, its air permeability, and thermal properties.

- (817) RUBNER, [M.]

1892. UEBER EINIGE WICHTIGE EIGENSCHAFTEN UNSERER KLEIDUNGSSTOFFE. [A few important properties of our clothing materials.] Arch. Hyg. 15: [29]-60.

Methods for measuring thickness, specific gravity, weight per unit area, and interspace of fabrics, carbon dioxide content of the atmosphere between the body and the clothing, water content, and adhesion of damp clothing are considered, together with the hygienic importance of these properties. Experimental data are given.

- (818) ———.

1895. DIE MIKROSKOPISCHE STRUCTUR UNSERER KLEIDUNG. [The microscopic structure of our clothing.] Arch. Hyg. 23: 1-12.

The value and possibilities of microscopy and photomicroscopy in studying the hygienic properties of clothing material are pointed out. The preparation and interpretation of cross sections of different fabrics are especially considered.

- (819) ———.

1896. SPHÄROMETER MIT VARIIRBARER BELASTUNG. [Spherometer with variable loads.] Arch. Hyg. 27: [44]-48, illus.

Description of an instrument for measuring the thickness with different loads. It is especially suited for testing the elastic properties of clothing material, that is, the compressibility under different conditions.

(820) RUBNER, [M.]—Continued.

1896. UEBER EINIGE WICHTIGE PHYSIKALISCHE EIGENSCHAFTEN DER KREPPSTOFFE. [A few important physical properties of crêpe materials.] Arch. Hyg. 27: [78]–101.

Comprehensive study of the physical properties of crêpe materials. Includes measurements of thickness, weight per unit area, specific gravity, heat conductivity, effect of work on the carbon dioxide content of the "Kleiderluft," moisture content and its effects.

(821) ———.

1896. NOTIZ ÜBER DIE HYGIENISCHE BEDEUTUNG VON SAMMTSTOFFEN. [Note on the hygienic importance of velvet materials.] Arch. Hyg. 27: [102]–104, illus.

Investigation of the physical properties of velvet materials affecting their hygienic value.

(822) ———.

1897. ZUR FRAGE DER SOGENANTEN UNTERKLEIDUNG. [The question of so-called underclothing.] Hyg. Rundschau 7: [329]–334.

Stresses the importance of suitable underwear materials and the difficulty of getting proper fabrics, especially for summer wear. Advantages and disadvantages of cotton and wool tricot are listed and the advantages of union fabrics are emphasized. Extensive tables are included giving data on physical properties of underwear fabrics as determined by the author, including physical data on a new fabric.

(823) ———.

1898. BEKLEIDUNGSREFORM UND WOLLSYSTEM. [Dress reform and the wool system.] Ztschr. Diätet. u. Phys. Ther. 2: [5]–14.

The clothing of an individual is discussed from the standpoint of ventilation, thickness, homogeneity, and heat transmission of the fabrics. The conclusion is that all-wool fabrics are not the most rational; wool is better in combination with other fibers. Tables are included showing the thickness and heat transmission of various kinds of fabrics.

(824) ———.

1900. UEBER DIE ANPASSUNGSFÄHIGKEIT DES MENSCHEN AN HOHE UND NIEDRIGE LUFTTEMPERATUREN. [The adaptability of human beings to high and low air temperatures.] Arch. Hyg. 38: [120]–147.

Report of a study on the effect of summer and winter clothing and furs on the carbon dioxide and water vapor eliminated by human beings at temperatures ranging from 2° to 40° C.

(825) ———.

1907. LEHRBUCH DER HYGIENE. [Textbook of hygiene.] Ed. 8, 1029 p., illus. Leipzig and Wien, Franz Deuticke.

Includes comprehensive treatise on the hygiene of clothing. The author describes his methods for determining the properties of fibers and fabrics and gives experimental results.

(826) ——— GRUBER, M., and FICKER, M.

1911. HANDBUCH DER HYGIENE. BD. 1. [Handbook of hygiene. v. 1.] 788 p., illus. Leipzig, S. Hirzel.

Includes (p. 583–628) a resumé of Rubner's scientific investigations on fabrics from the hygienic point of view. The thickness, density, air content, compressibility, permeability to air, heat conduction, and water capacity of a variety of fabrics were measured.

(827) RUHEMANN, W.

1928. NEUE WEGE IN DER HYGIENE DER SPORTKLEIDUNG. [New ideas for sport clothing.] Med. Welt 2: 828–830, illus.

Advocates the special light sport clothing now being manufactured for general use for men. Experiments are reported which show that this fabric is superior to ordinary cloth in

- (827) RUHEMANN, W.—Continued.

regard to light penetration, air permeability, and water absorption, and that its durability is equal. Observations on persons wearing this new material showed that fatigue was less and that the body remained drier than when clothed with ordinary fabrics. It is suggested that wearing this fabric would reduce rheumatism, bronchitis, and skin diseases.

- (828) RUMFORD, COUNT OF. [BENJAMIN THOMPSON.]

1787. EXPERIMENTS ON THE PRODUCTION OF DEPHLOGISTICATED AIR FROM WATER WITH VARIOUS SUBSTANCES. Roy. Soc. [London] Phil. Trans. 77: 84-124, illus. (Reprinted under the title, "Experiments on the production of air from water, exposed with various substances to the action of light" in *The Complete Works of Count Rumford* 1: [191]-231, illus. Boston, Amer. Acad. Arts and Sci. 1875.)

Describes experiments performed by the author in his study of the power of silk, eiderdown, rabbit fur, sheep's wool, cotton-wool, linen, and human hair to separate air from water exposed to light.

- (829) SALE, P. D., and HEDRICK, A. F.

1924. MEASUREMENT OF HEAT INSULATION AND RELATED PROPERTIES OF BLANKETS. U. S. Dept. Com., Bur. Standards Technol. Paper 266, (18: 529-546), illus.

Methods are described and apparatus described for measuring heat transmission and permeability to air and to water vapor of blankets. The methods are adaptable to textile fabrics in general. For popular treatments, see *Clothing Warmth*, *Textile Recorder* 41 (493): 75, 77, illus. 1924; *Clothes and Weather*, *Lit. Digest* 90 (7): 24. 1926; and *Your clothing in relation to the weather*, *Tycos* 16: 93-94, illus. 1926.

- (830) SCHEUER, O.

1911. KLEIDUNG, MODE UND HAUTKRANKHEITEN. [Clothing, fashion and cutaneous diseases.] *Deut. Vrtljh. Offentl. Gsndhts-pflege* 43: 709-733.

General consideration of chemical and physical properties of clothing and fashion that affect the condition of the skin. The subjects discussed include heat regulation, hygroscopic properties, air permeability, and poisonous dyestuffs. The skin is affected by the fabrics from which garments are made; by the wrong manner of wearing clothes; by ill-fitting garments; by the dyestuffs used; and by wearing dirty and second-hand clothing. The 47 references date from 1839 to 1910.

- (831) SCHULZE, W.

1910. ÜBER DEN EINFLUSS DER EINZELNEN APPRETURSTUFEN AUF DIE WAS-SER-, LICHT-, LUFT-, UND WÄRME-DURCHLÄSSIGKEIT EINES TUCHES. [The influence of different finishing materials on the water, light, air-, and heat-permeability of a fabric.] *Leipziger Monatschr. Textil-Indus.* 25: 228-229, 253-257, 287-289, 315-318, 341-344, illus.

For determining the water permeability of fabrics, Herzberg's method devised for testing paper was used. The relative permeability to light was determined by placing the samples side by side on photographic paper, exposing to either sunlight or artificial light, and then comparing the amount of blackening. The methods of Ernst Müller were used for determining the air permeability and heat penetration of fabrics. All the methods are described in detail and experimental data obtained on fabrics variously finished are given.

- (832) SPITTA and FÖRSTER.

1918-19. DIE HYGIENISCHEN EIGENSCHAFTEN EINIGER NEURER ERZEUG-NISSE AUS ERSATZFASERSTOFFEN. [The hygienic properties of some of the newer textiles made with substitute fibers.] *Arb. Reichsgsndhtsamt. [Germany]* 51: [460]-475.

The substitutes described are chiefly paper and various vegetable fibers. The fabrics are made of the substitute fiber

- (832) SPITTA and FÖRSTER—Continued.
alone or mixed with other fibers. The physical properties, such as thickness, porosity, water capacity, and heat capacity, were determined. The suitability of these fabrics for clothing as compared with wool and cotton is discussed.
- (833) STARK, J.
1834. DE L'INFLUENCE DE LA COULEUR SUR LE CALORIQUE ET LES ODEURS. [The effect of color on heat and odor.] *Ann. Hyg. Pub. et Méd. Lég.* 12: 54-69.
Reports an investigation on the effect of the color of the fabric on the absorption of heat and of odors.
- (834) TECHOUEYRES, E., and WALBAUM, M.
1927. NOTE AU SUJET DES QUALITÉS D'ISOLEMENT THERMIQUE, DE PERMEABILITÉ ET D'AFFINITÉ POUR L'EAU PRÉSENTÉES PAR LES DIVERSES SORTES D'ÉTOFFES UTILISÉES COMME SOUS-VÊTEMENTS. [Note on the subject of the property of heat insulation, of permeability, and of affinity for water possessed by various kinds of materials used for underwear.] *Bul. Acad. Méd.* [Paris] (3) 98: 107-109.
Describes the methods used for studying heat insulation, air permeability, and hygroscopic properties of various underwear fabrics. The author concludes that wool flannel is the most suitable type of fabric for undergarments.
- (835) VAN BEBBER, W. J.
1895. HYGIENISCHE METEOROLOGIE FÜR ÄRZTE UND NATURFORSCHER. [Hygienic meteorology for physicians and naturalists.] 330 p., illus. Stuttgart, Ferdinand Enke.
On pages 28 to 30 and 129 et seq. is discussed the rôle of clothing in maintaining an equilibrium between the atmosphere surrounding the body and the outside air as regards moisture content and temperature. The relation of climate and meteorological factors to clothing and to health is considered.
- (836) VAQUEZ, H.
1888. CONSIDÉRATIONS SUR L'HYGIÈNE DES VÊTEMENTS, À PROPOS DE TRAVAUX RÉCENTS PUBLIÉS EN ALLEMAGNE. [Considerations on the hygiene of clothing in connection with work recently published in Germany.] *Rev. Hyg. et Police Sanit.* 10: 890-912.
A review of studies on the properties of heat conductivity, air permeability, and water absorption. The investigations of Schuster, Geigel, and Hiller are especially considered. (See 1069, 1009, and 1128.)
- (837) WILLIAMS, W. M.
1885. THE PHILOSOPHY OF CLOTHING. XII.—THE ADVANTAGES OF WOOLLEN CLOTHING. *Knowledge* 8: 21-22.
Emphasizes the recommendations of Rumford (see 1140) that flannel be worn next to the skin during both summer and winter. Mentions that the wearing of flannel belts prevents dysentery in the Tropics.
- (838) ———.
1885. THE PHILOSOPHY OF CLOTHING. XIV.—THE SEBACEOUS FOLLICLES.—EIDERDOWN. *Knowledge* 8: 114-115.
Advocates wearing flannel because it absorbs the greasy secretion of the skin. Criticizes Rumford's experiments (see 1057) on heat-resisting properties of fabrics. Considers eiderdown the most effective heat retainer of all clothing materials.
- (839) ———.
1885. THE PHILOSOPHY OF CLOTHING. XV. *Knowledge* 8: 152-154.
Discusses the properties of eiderdown and the value of down and feathers for clothing and bedding. Contends that the water repulsion of feathers is due to films of air and not to oil.
- (840) YOKOTE, C.
1904. ÜBER DIE ZERSETZUNGSVORGÄNGE IN SCHMUTZIGER UNTERKLEIDUNG. [Concerning the decomposition process which takes place in dirty underwear.] *Arch. Hyg.* 50: [158]-164.
Determinations were made of the moisture, sodium chloride, and ammonia content of pieces cut from the armpits and the

(840) YOKOTE, C.—Continued.

back of a cotton tricot shirt which had been worn continuously for four months. Tests were also carried out on shirts of woolen and cotton flannel. The ammonia and carbon dioxide evolved at different temperatures was determined. Thermophilic bacteria were abundant.

CHEMICAL PROPERTIES

(841) ANONYMOUS.

1869. SOCK AND SHIRT POISONING BEFORE THE FRENCH ACADEMY OF MEDICINE. *Brit. Med. Jour.* 1869 (v. 1): 191.

Reports briefly on articles on this subject by Tardieu and Grand-Malais.

(842) ———.

1869. POISONOUS DYES. *Brit. Med. Jour.* 1869 (v. 1): 214–215.

Reports a further communication from Tardieu. A brief resumé is given of the distinctive chemical properties of different red dyes often met in commerce. Poisoning due to wearing socks dyed with corallin is mentioned.

(843) ———.

1871. POISONOUS GLOVES. *Med. Press and Circ.* 11: 55.

Brief reference to the poisoning of a lady's hands by green gloves. An aqueous extract of the gloves showed the presence of an arsenical salt.

(844) ———.

1875. CASE OF POISONING BY ANILINE DYE. *London Med. Rec.* 3: 396.

Inflammation and headache were caused by wearing a hat, the leather band of which was dyed with aniline dye.

(845) ———.

1889. ZUM SCHWEISSELEDER DER HÜTE. [For the sweatbands of hats.] *Prager Med. Wehnschr.* 14: 458–459. (Reported in *Sanitarian* 24: 265. 1890.)

Fatty acids present in the sweatband of a hat may penetrate into the forehead and cause inflammation. Burnt magnesia rubbed on the band is suggested as a preventive. For general use, a felt sweatband which contains no fatty acids is advised.

(846) ———.

1890. SUR LES DANGERS DES BAS TEINTS EN ROUGE. [Concerning the dangers of inferior red dyes.] *Rev. Internatl. Falsif.* [Amsterdam] 4: 92.

Short report of an analysis of a dye used in red cotton stockings for children. Aniline, antimony oxide, and a little arsenic were found. The danger in wearing such stockings is pointed out.

(847) ———.

1898. ALLEGED DEATH FROM WEARING A DYED STOCKING. *Lancet* [London] 1898 (v. 2): 704.

Report of a case of death due to acute septicæmia, probably caused by wearing dyed stockings containing logwood and potassium bichromate.

(848) ———.

1898. POISONOUS OVERCOATS. *Brit. Med. Jour.* 1898 (v. 2): 1706–1707.

Report of several poisoning cases traced to zinc chloride used in the manufacture of overcoats. The coats had been issued to workmen who were assisting in cleaning the streets after a snowstorm.

(849) ———.

1914. LIABILITY OF VENDORS OF DYED FURS FOR INJURIES TO HEALTH. *Jour. Amer. Med. Assoc.* 62: 562–563.

The Supreme Court of Michigan holds that it is a question for the jury to decide whether or not a wholesaler of furs is responsible for damages when cases of dyed fur dermatitis oc-

- (849) ANONYMOUS—Continued.
cur, especially when these dyed furs are not labeled or the purchaser warned in any way that the dyed fur may give rise to skin trouble.
- (850) ———.
1921. NITROBENZENE POISONING, METHEMOGLOBINEMIA AND WINCKEL'S DISEASE. *Jour. Amer. Med. Assoc.* 77: 1108-1109.
General discussion of methemoglobinemia and its symptoms. It may be caused by nitrobenzene or aniline in dye mixtures.
- (851) ———.
1926. SHOE DYES AND ANILINE POISONING. *Jour. Amer. Med. Assoc.* 87: 34.
General discussion of dyes which cause poisoning. Holds that the toxic ingredient is the solvent, nitrobenzene or other aniline derivative, which affects the heart muscles and conductive tissue.
- (852) AARON, I.
1871-72. POISONED SOCKS. *N. S. Wales Med. Gaz.* 2: 216-217.
Discussion of two cases of poisoning and skin irritation from aniline dyed socks.
- (853) ADAMS, S. S.
1912. NITROBENZOL POISONING. *Assoc. Amer. Physicians Trans.* 27: [503]-513.
Report of fatal poisoning due to shoe blacking. Describes many cases of poisoning in which the amount of poison and the mode of its entrance to the body varied considerably.
- (854) AIKMAN, J.
1928. SHOE-DYE POISONING. *Amer. Jour. Diseases Children* 35: [1038]-1040.
Three cases of poisoning from shoe dye are reported in which the victims were children aged 6, 9, and 13 years, respectively. Previous workers had reported both aniline and nitrobenzene as the cause, although the exact toxic agent is unknown.
- (855) ALBERT, H., and WALLACE, J.
1927. FIVE RECENT CASES OF SHOE-DYE POISONING. *Jour. Iowa State Med. Soc.* 17: 225-227.
General report of five cases of poisoning from freshly dyed shoes. One case is described in detail. The dye contained more than 30 per cent ortho-toluidine.
- (856) ASHWELL, J. R.
1886. DYED HOSIERY AND ITS RELATION TO SKIN IRRITATION. *Med. Rec.* [New York] 30: 574-575.
Discussion of dyes and mordants used in the process of dyeing hosiery. The author considers aniline dyes in the soluble form harmless, but the insoluble form possibly injurious.
- (857) AUFRECHT.
1926. ÜBER GIFTIGE SCHUHPUTZMITTEL. [Poisonous shoe dressing.] *Chem. Ztg.* 50: 8.
In one case reported, an American-made shoe dressing contained calcium cyanide in sufficient quantities to produce cyanic acid poisoning. A German shoe polish which caused poisoning contained methyl alcohol, fusel oil, and pyridine.
- (858) BESSON, A.
1901. UN CAS D'EMPOISONNEMENT PAR DES CHAUSSURES DE CUIR JAUNE NOIRCI PAR UNE TEINTURE À BASE D'ANILINE. [A case of poisoning due to yellow leather shoes dyed black by a dye with an aniline base.] *Jour. Sci. Méd. Lille* 1901 (1): [457]-464. (Reviewed in *Jour. Méd. Interne* [Paris] 5: 990.)
Detailed report of one case of poisoning from shoe dye and reference to other cases reported by Landouzy and Brouardel (see 899), together with a general discussion of the subject.

(859) BETTMANN.

1920. BEMERKUNGEN ÜBER EINE DURCH SCHWEISSLEDERERSATZ HERVORGERUFENE DERMATITIS. [Notes on the production of dermatitis produced by sweatbands of artificial leather.] München. Med. Wchnschr. 67: 291.

Examination of a sweatband in a hat showed it to be made of a leather substitute containing resorcin to which the dermatitis was ascribed.

(860) BISCHOFF, C.

1883. ANTIMONGEHALT GEFÄRBTEN BAUMWOLLGARNE. [Antimony content of dyed cotton yarn.] Repertorium Analyt. Chem. 3: [305]-306.

Report of the determination of water-soluble and acid-soluble antimony compounds remaining in dyed cotton fabrics in which antimony salts had been used as a mordant. The author points out the physiological importance of soluble antimony compounds in connection with dermatitis, although he leaves the determination of what constitutes a toxic amount to the medical profession.

(861) BLAKE, J. G.

1868. COLOURED SOCKS AND ECZEMA. Med. Times and Gaz. [London] 1868 (v. 2): 458. [Letter to the editor.]

Reports a case of poisoning (eruption) from wearing dyed socks.

(862) BLASCHKO, A.

1913. UEBER HAUTERKRANKUNGEN DURCH HAAR-UND PELZFÄRBEMITTEL. [Concerning skin diseases due to hair and fur dyes.] Deut. Med. Wchnschr. 39: 2406-2408.

Report of the poisoning of a man and a woman caused by wearing fur collars dyed with paraphenylenediamine. Poisoning caused by dyes is discussed and treatment suggested. If dyed fur is properly washed and rubbed with paper until no more dye is removed, it can be worn safely.

(863) BLASIUS.

1860. ARSENIKHALTIGES KLEID. [Clothing containing arsenic.] Deut. Klinik [Berlin] 12: 52.

Note concerning a young woman who was poisoned by wearing a bright green tarlatan dress to a ball.

(864) BOURQUELOT and GALIPE.

1880. ANALYSE D'UN MORCEAU DE FLANELLE ROUGE. [Analysis of a piece of red flannel.] Ann. Hyg. Pub. et Méd. Lég. (3) 3: 254.

Analysis of a piece of red flannel which had produced a skin eruption on the wearer showed the presence of arsenic, which had probably been used as a mordant.

(865) BRETON.

1900. EMPOISONNEMENT ACCIDENTEL PAR L'ANILINE. [Accidental poisoning by aniline.] Gaz. Hôpitaux 73: 1290-1291.

Reports case of poisoning from wearing shoes dyed with a preparation containing aniline. Experiments on guinea pigs are reported.

(866) BROUARDEL, P., RICHE, A., and THOINOT, L.

1902. UN CAS D'INTOXICATION PAR DES CHAUSSURES JAUNES NOIRCIES À L'ANILINE. [A case of poisoning by yellow shoes dyed black with an aniline dye.] Ann. Hyg. Pub. et Méd. Lég. (3) 48: 385-399; Jour. Méd. [Paris] (2) 14: 427-428, 447-448.

Case of poisoning by shoe dye containing aniline is reported in minute detail. Abstracts of several similar cases reported in the literature are also given.

(867) BROWN, J. C.

1869. POISONOUS DYES. Liverpool Med. and Surg. Rpts. 3: [47]-48.

Corallin, a bright-red dye used for dyeing silks and wools, is notorious for producing local exanthema. Red silk socks responsible for an eruption on the feet of the wearer are mentioned.

- (868) BUFFET-DELMAS.
1908. UN CAS D'INTOXICATION PAR L'ANILINE. [A case of poisoning due to aniline.] Poitou Méd. Rev. Mens. 18: 2-4.
The case of a woman poisoned by wearing dyed black slippers for only one-half hour.
- (869) CARR, H.
1879. OUR DOMESTIC POISONS; OR, THE POISONOUS EFFECTS OF CERTAIN DYES & COLOURS USED IN DOMESTIC FABRICS. 50 p. London, William Ridgway.
General treatment of the poisonous effect of dyes. Many cases are cited in which poisoning was brought about by the wearing of dyed fabrics.
- (870) ———.
[1880.] POISONS IN DOMESTIC FABRICS IN RELATION TO TRADE AND ART; BEING A SEQUEL TO THE PAMPHLET, "OUR DOMESTIC POISONS, FROM THE SANITARY POINT OF VIEW." 31 p. London, William Ridgway.
General discussion of the ill effects of arsenic poisoning. The public is warned that poisoning may be due to arsenic in the dyes used in wall paper, textile fabrics, paints, shoes, and stockings. Eight cases of poisoning are reported.
- (871) CARROLL, A. L.
1873. TWO CASES OF ANILINE-POISONING. Phila. Med. Times 3: 419-420.
Report of local poisoning of a woman who used a strip of red flannel as a bandage for rheumatic knees and of a man who wore a pair of gloves, the wristbands of which were ornamented with a broad stripe of aniline purple.
- (872) CASTLE, W. F.
1923. [DERMATITIS FROM DYED FUR.] Brit. Med. Jour. 1923 (v. 1): 535.
Includes a list of dyes and dyeing procedure for cheap furs. It is suggested that faulty dyeing, such as leaving unneutralized mordant, may be responsible for poisoning as well as the dyestuff itself.
- (873) CAZENEUVE, P.
1928. A PROPOS DES ACCIDENTS CUTANÉS DUS AUX FOURRURES TEINTES À L'AIDE DE CERTAINES MATIÈRES COLORANTES. [Apropos of cutaneous injuries due to furs dyed with the aid of certain coloring materials.] Ann. Hyg. Pub., Indus. et Sociale [Paris] (n. s.) 4: [249]-256.
Quotes various authorities and concludes that dermatosis is not caused by dyes but by the incomplete removal of the mordants, or of amines, diamines, amino-phenols, and the like, which have not undergone complete oxidation in the development of the dye. Removal of all traces of the mordant and of the unoxidized materials is essential for safety.
- (874) CHEYNE, R. R.
1874. ARSENICAL POISONING BY ARTICLE OF DRESS. Brit. Med. Jour. 1874 (v. 2): 643-644.
Describes the poisoning of a boy 2 years old, caused by wearing a ruby-colored merino tunic, in which the presence of arsenic was detected.
- (875) CLOUD, R. E.
1922. POISONING BY SHOE DYE. Jour. Amer. Med. Assoc. 78: 280.
Report of a case in which poisoning occurred three hours after dyeing shoes.
- (876) COLE, H. N.
1927. INVESTIGATION OF INJURIES FROM HAIR DYES, DYED FURS, AND COSMETICS. Jour. Amer. Med. Assoc. 88: 397-399.
By a questionnaire sent out under the auspices of the American Medical Association, data were gathered on 56 cases of poisoning due to dyed clothing and 144 cases due to dyed fur.

(877) COURTOIS-SUFFIT.

1900. ACCIDENTS LOCAUX TRÈS PARTICULIERS PRODUITS PAR UNE TEINTURE SERVANT À NOIRCIR LES SOULIERS. [Local symptoms produced by a dye used for blackening shoes.] *Gaz. Hôpitaux* 73: [1479]-1480.

Describes a case of poisoning from shoe dye containing aniline.

(878) CREYX.

1913. L'EMPOISONNEMENT PAR LES CHAUSSURES NOIRCIES À L'ANILINE. [Poisoning by shoes dyed black with a dye containing aniline.] *Jour. Méd. Bordeaux* 43: [495]-498.

Reports cases of a young woman poisoned by painting with aniline green and of boys of 19 and 16 years poisoned from shoes dyed with an aniline dye. Gives review of other cases reported in the literature and a general discussion of symptoms and treatment. These poisonings were caused by aniline, acetanilide, and phenol.

(879) EHRMANN, E. [C. A.]

1922. TRAITÉ DES MATIÈRES COLORANTES ORGANIQUES ET DE LEURS DIVERSES APPLICATIONS. [Treatment of organic coloring materials and their different applications.] 615 p. Paris, Dunod.

Gives explicit directions (p. 592-598) for dyeing furs. Instructions are also included for the dyeing of shoes and a discussion of the toxic effect of some of the dyes used. Vegetable dyes are recommended.

(880) ETIENNE, G.

- 1913-14. DEUX CAS D'ANILISME AIGU. [Two cases of acute aniline poisoning.] *Scalpel et Liege Méd.* 66: 545-546.

Describes two cases of poisoning due to wearing dyed shoes, one a young man of about 30 years, the other a child of 3 years.

(881) FEILCHENFELD, L.

1909. UEBER EINE DURCH HANDSCHUH-FARBE HERVORGERUFENE HAUTENTZÜNDUNG. [Concerning a dermatitis caused by a glove dye.] *Deut. Med. Wchnschr.* 35: 2065.

Cites a case of dermatitis of a lady due to wearing dyed yellow gloves. The exact nature of the dye is not stated.

(882) GOEBEL, F.

1900. UNTERSUCHUNGEN ÜBER DAS VORKOMMEN LÖSLICHER ANTIMONVERBINDUNGEN IN KLEIDUNGSTOFFEN. [Investigation concerning the occurrence of soluble antimony compounds in clothing materials.] 15 p. Würzburg. (Inaug. Diss.)

Fabrics used for men's and women's clothing, linings, furniture upholstery, stockings, and cotton bedding were examined for soluble antimony compounds. In no case was an appreciable quantity found.

(883) GORDON, A. K.

1924. A NOTE ON THE PATHOLOGY OF FUR DERMATITIS. *Med. Press and Circ.* (n. s.) 117: 257-259.

Describes experiments on human skin showing that only the soluble derivatives of paraphenylenediamine may give rise to dermatitis. In case of a claim involving a fur containing no soluble dyestuffs, the author recommends careful consideration of the genuineness of the claim. The patient should be examined for seborrhea or for undue sensitivity to rabbit protein. The dermatitis may be due to dirt and bacteria on the collar itself.

(884) GRAVES, G. W.

1928. SADIE'S SHOES. . . . *Hygeia* [Chicago] 6: 26-28, illus.

Popular article telling of a case of poisoning from shoe dye containing aniline.

(885) GROS.

1901. EMPOISONNEMENT PAR LA CHAUSSURE. [Poisoning from shoes.] *Lyon Méd.* 96: 176-177.

Case of poisoning resulting from dyed shoes is described. The dye contained some aniline black, some oil of aniline, and some nitrobenzene.

- (886) GRUBB, J. S.
1877. POISONING BY COLOURED SILK STOCKINGS. *Lancet* [London] 1877 (v. 2) : 226.
Report of a skin irritation caused by wearing dyed stockings. Analysis showed the presence of corallin, an aniline compound.
- (887) GUNDRUM, F. F.
1918. NITRO-BENZOL POISONING. *Calif. State Jour. Med.* 16: 252-253.
Cases of nitrobenzene (oil of mirbane) poisoning are reported. Fumes from nitrobenzene spilled on one patient's clothing and used as a solvent for removing paraffin from another's clothing proved fatal to both. One person was poisoned by absorption through the skin of nitrobenzene contained in shoe polish.
- (888) GUYOT, P.
1871. NOUVEAUX ACCIDENTS CAUSÉS PAR LES CHAUSSETTES EMPOISONNÉES; EXPLICATION DU PROBLÈME. [New accidents caused by poisonous shoes; explanation of the problem.] *Courrier Méd. et Reforme Méd.* [Paris] 21: 236-238, 242-245.
Reports several cases of poisoning due to dyes containing phenol and rosolic acid. Observations, suppositions, and general conclusion on toxic values of corallin and its congeners of the phenol group are included.
- (889) HAFT, H. H.
1928. HEMATURIA DUE TO SHOE DYE POISONING. *Jour. Amer. Med. Assoc.* 90: 742-743.
Cites a case of hematuria in a young man who wore freshly dyed black shoes.
- (890) HALIPRE, A., and BELICAUD.
1900. EMPOISONNEMENT GRAVE PAR DES BOTTINES DE CUIR JAUNE RECOUVERTES D'UN VERNIS NOIR. [Serious poisoning from yellow leather shoes re-covered with black polish.] *Rev. Méd. Normandie* [Rouen] 1: 366-372.
Case of shoe-dye poisoning is described in detail.
- (891) HARVEY, W. G.
1924. NOTES ON SOME RECENT CASES OF FUR DERMATITIS. *Irish Jour. Med. Sci.* (5) 1924: 316-317.
Describes cases of fur dermatitis and presents evidence in support of the view that the dermatitis is caused by improperly fixed dye or mordant.
- (892) HÖLKER.
1920. HAUTAUSSCHLÄGE BEI ERSATZ-SCHWEISSLEDER IN UNIFORMMÜTZEN. [Skin eruption caused by imitation leather sweatbands in military caps.] *Deut. Med. Wehnschr.* 46: 492.
Investigation showed that an eruption was caused by imitation leather hatbands made on a paper foundation. The bands were coated with a resinlike mixture which liberated carbolic acid.
- (893) HOESSLIN, R. VON.
1888. PICKRINSÄURE-DERMATITIS. [Picric acid dermatitis.] *München. Med. Wehnschr.* 35: 637-638.
Description of a case of local poisoning from wearing low-cut shoes, lined with an orange-yellow leather. The coloring rubbed off and penetrated to the skin, causing a severe itching, burning, and finally tiny blisters. Analysis of the leather showed that it had been dyed with picric acid.
- (894) IMAGE, F. E.
1880. CASES OF ARSENIC POISONING FROM WALL-PAPER AND DRESS. *Practitioner* [London] 24: 110-111.
Reports a case of poisoning of a young lady who wore a green tarlatan dress to a ball. Large quantities of Scheele's green were found loosely attached to the fibers of the dress fabric.

(895) JAPHA, A.

1917. VERGIFTUNG MIT ANILINÖL. [Poisoning with aniline.] München. Med. Wchnschr. 64: 1317.

Reports a case of poisoning due to wearing freshly dyed riding breeches. Similar symptoms were observed fifteen years previous in a 5-year-old child who was poisoned by wearing shoes dyed black with an aniline dye.

(896) KAYSER, R.

1883. ANTIMON IN GEFÄRBETEN GEWEBEN. [Antimony in dyed textile fabrics.] Repertorium Analyt. Chem. 3: 121-122.

Paragraph reporting a case of poisoning of the thigh due to a brownish cotton fabric used for pockets in the breeches. Sufficient quantities of antimony may be left in improperly dyed fabrics to cause poisoning of the wearer.

(897) KRAFFT, K.

1920. PHENOLHALTIGER SCHWEISSLEDER-ERSATZ. [Sweatbands of a leather substitute containing phenol.] Chem. Ztg. 44: 517.

Reports two cases of eruptions apparently caused by sweatbands of hats. Chemical analysis showed that the bands were made of artificial leather containing phenol and its derivatives. Suggests that heat and acid perspiration liberated the phenol, which then reacted upon the skin.

(898) KUBLA.

1917. RICERCA DEL SUBLIMATO NELLE STOFFE. [Detection of mercuric chloride in cloth fabrics.] (Abstract [in Italian].) Bol. Chim. Farm. [Milano] 56: 170. 1917. Abstract in Chem. Abs. 12: 1125-1126. 1918.

These abstracts were taken from an article published in Arch. Med. et Pharm. Mil. As a result of an experimental study the use of mercuric chloride for disinfection of military clothing is criticized because of the quantity absorbed by the cloth. This amount is sufficient to cause possible injury to the skin when such clothing is worn.

(899) LANDOUZY, L., and BROUARDEL, G.

1900. EMPOISONNEMENT NON PROFESSIONNELS PAR L'ANILINE . . . [Non-occupational poisoning from aniline . . .] Bul. Acad. Méd. [Paris] (3) 44: 114-127.

Discusses nine cases of poisoning from shoe dye containing aniline. The victims were children ranging in age from 17 months to 14 years. Also reports experiments carried out on guinea pigs and rabbits to determine the toxicity of aniline.

(900) LAURENT, C., and GUILLEMIN.

1901. SEPT CAS D'INTOXICATION PAR UNE TEINTURE À BASE D'ANILINE SERVANT À NOIRCIER DES CHAUSSURES. [Seven cases of poisoning due to a dye with an aniline base used for blackening shoes.] Gaz. Maladies Infant. et "Jour. Clinique et Ther. Infant. Réunis." [Paris] 3: 41-43; Rev. Gén. Clinique et Ther. Jour. Praticiens [Paris] 15: 131-135.

Six cases of poisoning occurred in one family in one day due to the wearing of freshly dyed shoes. From analyses and experiments on rats the dye was found to contain aniline to which the poisoning is attributed.

(901) LEE, H.

1879. POISONING BY RED DYES. Lancet [London] 1879 (v. 1): 856-857.

Reports one case of an eruption on the hands caused by the lining of gloves and two cases of an eruption on the thighs and legs due to red drawers.

(902) LEFFMANN, H.

1881. PRELIMINARY NOTE ON POISONOUS DYE-STUFFS. Phila. Co. Med. Soc. Proc. 3: 7-8. Phila. Med. Times (1880/81) 11: 46-47.

Preliminary note mentioning the types of poisoning due to dyestuffs.

- (903) LEVIN, S. J.
1927. SHOE-DYE POISONING—RELATION TO METHEMOGLOBIN FORMATION. . . . Jour. Amer. Med. Assoc. 89: 2178-2180.
Case of poisoning of a 2-year-old child traced to nitrobenzene in shoe dye. Experiments carried out to determine the effect of nitrobenzene on the blood of a dog, rabbits, rats, guinea pigs, and cats, in vivo, and on the bloods of these animals and on human blood in vitro are reported.
- (904) MCGUIRE, J. C.
1887. DERMATOSES PRODUCED BY DYESTUFFS. Jour. Cutaneous and Genito-Urinary Diseases 5: 59-61.
Reports four cases of poisoning due to wearing, respectively, gloves with a bright-red lining, bright-red stockings, red-lined shoes, and red fleece-lined gloves, and one case due to handling colored fabrics.
- (905) MEERES, E. E.
1869. POISONOUS SOCKS. Lancet [London] 1869 (v. 2): 190.
Report of a case of poisoning from dyed socks.
- (906) MINER, C. S.
1919. METHEMOGLOBINEMIA DUE TO POISONING BY SHOE DYE. Jour. Amer. Med. Assoc. 72: 593.
Note pointing out that although most shoe dyes contain large percentages of nitrobenzene, shoe-dye poisoning is rarely seen. The author holds that the poisoning is not produced by nitrobenzene itself but by some by-product, such as tetranitromethane.
- (907) MONGOUR, C.
1908. EMPOISONNEMENT PAR DES CHAUSSURES TEINTES AU NOIR D'ANILINE. [Poisoning by shoes dyed black with aniline.] Gaz. Hebdom. Sci. Méd. Bordeaux 29: 609-610.
Report of a girl who was poisoned by wearing brown shoes freshly dyed black.
- (908) MUEHLBERGER, C. W.
1925. SHOE DYE POISONING. Jour. Amer. Med. Assoc. 84: 1987-1991.
Forty-eight cases of shoe-dye poisoning cited in American and European literature are analyzed. In 25 of the American cases, nitrobenzene was the toxic agent; in the European cases, aniline was the chief toxic agent. Reports 10 new cases observed by different physicians.
- (909) MÜLLER-HESS, R. V.
1920. DERMATITIS, HERVORGERUFEN DURCH PHENOLHALTIGEN SCHWEISSELEDERERSATZ. [Dermatitis due to the phenol contained in an artificial leather sweatband of a hat.] Deut. Med. Wchnschr. 46: 491-492.
Chemical examination showed that the artificial leather used for hatbands contained phenol and caused a disagreeable eruption on the forehead.
- (910) MURRAY.
1877. ANILINE POISONING. Med. and Surg. Rptr. [Philadelphia] 37: 69.
Report of a case in which a 3-year-old girl's legs were poisoned, apparently by wearing scarlet stockings.
- (911) NAGY, A.
1910. GESUNDHEITSSCHÄDEN DURCH ANTIMONVERBINDUNGEN IN KLEIDUNGSSTÜCKEN. [Injuries to health due to antimony compounds in articles of clothing.] Amtsarzt 2: 30-32.
Description of the effects on the skin of antimony poisoning. The author observes that poisoning is most frequent during hot weather, appears only on the skin covered with the dyed fabric, and is most evident on places subjected to friction by shoes or garters.
- (912) NEUHOFF, F.
1921. POISONING FROM WEARING DYED SHOES. Jour. Missouri State Med. Assoc. 18: 53-54.
Case of shoe-dye poisoning of a boy 15 years old is reported. The poisoning was due to nitrobenzene in the dye.

(913) NEULAND, W.

1921. ÜBER VERGIFTUNGEN VON SÄUGLINGEN UND KINDERN DURCH METHÄMOGLOBIN-BILDENDE SUBSTANZEN (ANILIN, NAPHTHALIN, USW.) [Concerning the poisoning of infants and children through methemoglobin-forming substances (aniline, naphthaline, etc.).] Med. Klin. 17: 903-905.

Review of the literature and general discussion of the subject. Thirty-nine references are included.

(914) OLSON, G. M.

1916. DYED FUR (PARAPHENYLENEDIAMIN) DERMATITIS WITH REPORT OF FIVE CASES. Jour. Amer. Med. Assoc. 66: 864-865.

General discussion of the symptoms, causes, diagnosis, treatment, and legal aspect of dyed fur dermatitis. The cases include two men and two women who wore topcoats with dyed fur collars, and one woman who wore a black pony coat.

(915) PARSONS, A. C.

1924. FUR DERMATITIS. . . . [Gt. Brit.] Min. Health, Rpts. Pub. Health and Med. Subjs. no. 27, 31 p.

Reports cases of skin eruptions occurring frequently during 1922 and 1923. The symptoms and diagnosis are given and the poisoning attributed to paraphenylenediamine and metaphenylenediamine in the dye of the fur collars.

(916) PATEK, A. J.

1926. ANILINE SHOE DYE POISONING. REPORT OF THREE CASES. Jour. Amer. Med. Assoc. 86: 941-945.

Three new cases of poisoning caused by aniline shoe dye are reported.

(917) PUY-LE-BLANC.

1893. ÉRUPTION VESICULEUSE DES DEUX MAINS PROVOQUÉE PAR L'USAGE DE GANTS ROUGES DITS EN PEAU DE CHIEN. [Vesicular eruption on both hands caused by wearing red dogskin gloves.] Jour. Malades Cutanées et Syphilitiques 5: 86-88.

Description of a case of poisoning caused by wearing red gloves.

(918) RAYNER, W.

1886. CYANOSIS IN NEWLY BORN CHILDREN CAUSED BY ANILINE MARKING INK. Brit. Med. Jour. 1886 (v. 1): 294.

Description of the blue and purple color of infants whose napkins were stamped with a chloride of aniline dye stamp. After being washed, the napkins were no longer toxic. All cases recovered.

(919) REYNOLDS, H. I.

1924. REPORT OF A CASE OF CYANOSIS DUE TO POISONING FROM SHOE DYE. Jour. Med. Assoc. Ga. 13: 348-349.

Case of shoe-dye poisoning is discussed. The dye contained nitrobenzene (oil of mirbane). The author holds that poisoning is due to this or to some by-product such as tetranitromethane.

(920) RICHARDSON, J. G.

1873. ANILINE-POISONING FROM A CRIMSON NECK-HANDKERCHIEF. Phila. Med. Times 3: 339-340.

Report of a case of poisoning of a farmer who wore a crimson silk neck handkerchief. The treatment is described.

(921) RICHE, A.

1903. TEINTURES NOIRES POUR CHAUSSURES JAUNES. [Black dyes for yellow shoes.] Méd. Mod. [Paris] 14: 235-236.

Results of analyses of shoe dyes for aniline and suggested ways to prevent their sale.

(922) [RIEDEL.]

1870. ARSENIKVERGIFTUNG DURCH TARLATANKLEIDERSTOFF. [Case of arsenic poisoning due to a tarlatan fabric.] Berlin Klin. Wchnschr. 7: 471-472.

Account of arsenic poisoning in a mother and three daughters. One of the daughters pressed a green tarlatan dress

- (922) [RIEDEL.]—Continued.
 which the mother and other daughters had made. One daughter wore the dress to a ball. The physician who had a sample of the material in his office suffered from sore eyes as a result of handling it. The poisoning was ascribed to the the presence of arsenic compounds in the dyestuff. (See 863 and 894.)
- (923) RIVIÈRE.
 1911. INTOXICATION PAR DES SOULIERS NOIRCÉS À L'ANILINE. [Poisoning from shoes blackened with an aniline dyestuff.] *Ann. Méd. et Chirurg. Infant.* 15: 551.
 Short report of a case of cyanosis observed in a child following the use of shoe dye containing aniline.
- (924) RODDA, F. C.
 1923. NITROBENZOL POISONING IN CHILDREN; REPORT OF THREE CASES CAUSED BY SHOE DYE. *Minn. Med.* 6: 544-547.
 Detailed description of three cases of poisoning which occurred within a few hours after wearing newly dyed shoes. Includes a discussion of the composition of nitrobenzol, its effect on the blood, symptoms of poisoning, and treatment.
- (925) ROLAND.
 1900. INTOXICATION PAR UNE TEINTURE SERVANT À NOIRCIR LES SOULIERS. [Poisoning by a dye used for blackening shoes.] *Poitou Méd. Rev. Mens.* 15: 174-176.
 Two cases of poisoning due to wearing shoes blackened with a dyestuff containing aniline are reported.
- (926) ROXBURGH, A. C.
 1923. DERMATITIS FROM DYED FUR. *Brit. Med. Jour.* 1923 (v. 1): 534-535.
 Discussion of cases of poisoning due to wearing dyed cony. The delayed appearance of poisoning in some cases is thought to be due to the patient gradually developing a sensitiveness to the irritant.
- (927) ———.
 1925. EIGHTY-SIX CASES OF DERMATITIS DUE TO DYED FUR. *Brit. Jour. Dermatology and Syphilis* 37: 126-132. (Reviewed in *Jour. Amer. Med. Assoc.* 84: 987.)
 Analysis of 86 cases of dermatitis due to dyed fur, treated at St. Bartholomew's Hospital. Eighty-four cases were due to rabbit fur dyed brown, one to goat dyed black, and one to an unknown black fur.
- (928) SANDERS, F. G.
 1920. NITROBENZENE POISONING WITH CYANOSIS. *Jour. Amer. Med. Assoc.* 74: 1518-1519.
 Report of a case of poisoning due to wearing shoes immediately after they were dyed.
- (929) SELL.
 1887. TECHNISCHE ERLÄUTERUNGEN ZU DEM ENTWURF EINES GESETZES, BETREFFEND DIE VERWENDUNG GESUNDHEITSSCHÄDLICHER FARBEN BEI DER HERSTELLUNG VON NAHRUNGSMITTELEN, GENUSSMITTELEN UND GERRAUCHSGEGENSTÄNDEN. [Technical comments toward the outline of a law concerning the use of colors injurious to health in the preparation of foods, condiments and commodities.] *Arb. K. Gsmdhtsamt.* 2: [232]-297.
 Textile fabrics (p. 268-280) form a part of an exhaustive treatise in which the dangers attending the use of poisonous substances employed as dyes in clothing and household equipment are pointed out and legislation urged against their use. The literature is well reviewed.
- (930) SEMON, H. C.
 1923. DERMATITIS FROM DYED FUR. *Brit. Med. Jour.* 1923 (v. 1): 467.
 Report of an epidemic of fur dermatitis due to wearing dyed cony which is thought to be rabbit fur dyed by one of the paraphenylenediamine group of textile dyes.

- (931) SEMON, H. C.—Continued.

1923. DERMATITIS AND DYED FUR. Brit. Med. Jour. 1923 (v. 1): 613.

Report of the chemical analysis of the dyestuffs used in the furs mentioned in the preceding citation. Metaphenylenediamine base was present. Defects in the dyeing process and the solubility of certain portions of the dye in sweat and sebaceous secretions are considered responsible for the dermatitis.

- (932) SENDTNER, R.

1893. ERFAHRUNGEN AUF DEM GEBIETE DER CONTROLE DER LEBENSMITTEL UND GEBRAUCHSGEGENSTÄNDE. [Studies in the field of control of provisions and condiments.] Arch. Hyg. 17: [429]–439.

On page 433, the danger of using antimony salts as a mordant for dyestuffs on textile fibers is pointed out. A case of poisoning from wearing red stockings and a piece of red wool found to contain a large amount of antimony are described.

- (933) SHINABERY, L.

1927. POISONING FROM SHOE DYE—REPORT OF CASE. Jour. Ind. State Med. Assoc. 20: 296–297.

Case of poisoning from shoe dye is discussed. No analysis was made of the dye.

- (934) SIEVEKING.

1905. ÜBER VERMEINTLICHE GESUNDHEITSSCHÄDLICHKEIT DES UNGEZIEFERMITTELS, "PUFFI," SOURE EINES GELBEN HANDSCHUHFUTTERS UND BUNTER ABZIEHBILDER. [Concerning the supposed injuriousness to health of the vermin reagent "Puffi," as well as of a yellow glove lining and colored transfer designs.] Ärztl. Sachverständigen-Ztg. 11: 176–177.

Reports a case of eczema on the hands attributed to the aniline dyestuff used in dyeing the yellow lining of leather gloves.

- (935) STANGENBERG, J.

1920. HAUTENTZÜNDUNG DURCH HUTSCHWEISS—"LEDER." [Inflammation of the skin due to "leather" sweatbands in hats.] Deut. Med. Wchnschr. 46: 355.

An eruption on the forehead was found to be due to wearing a hat with an artificial leather band. Judging from the odor, carbolic acid was present in the paper imitation of leather.

- (936) STIFEL, R. E.

1919. METHEMOGLOBINEMIA DUE TO POISONING BY SHOE DYES. Jour. Amer. Med. Assoc. 72: 395–396.

Report of 17 cases in any Army camp of shoe-dye poisoning. Analysis suggested that the poisoning was due to nitrobenzene in the dye.

- (937) ———.

1919. REPORT OF A CASE OF CYANOSIS AT CAMP JACKSON, S. C., DUE TO POISONING FROM SHOE DYE. Jour. Amer. Med. Assoc. 72: 592–593.

Poisoning from shoe dyeing is discussed and a complete history of one case given. The author claims that shoes should not be worn for three or four days after they are dyed.

- (938) STOCKARD, C. C.

1883. POISONING FROM BLUE STOCKINGS. Med. Rec. [New York] 24: 246.

Case of a boy who developed an eruption which had the appearance of ecthyma is reported. It was thought to be due to the wearing of navy blue stockings.

- (939) STONE, W. J.

1904. FATAL POISONING DUE TO SKIN ABSORPTION OF LIQUID SHOE BLACKING (NITROBENZOL). WITH AUTOPSY REPORT. Jour. Amer. Med. Assoc. 43: 977–980, illus.

Reports history, examination, and autopsy of a fatal case of poisoning resulting from wearing dyed shoes. The dye

- (939) STONE, W. J.—Continued.
contained nitrobenzene. Other cases where nitrobenzene alone brought about injurious effects are cited.
- (940) TAUNTON, G.
1898. AN OUTBREAK OF ACUTE DERMATITIS DUE TO ZINC SALT AND ASSOCIATED WITH CLOTHING. *Lancet* [London] 1898 (v. 2): 1470-1471.
Report of 34 cases of poisoning of workmen who had been supplied with new, blue, frieze overcoats. An infusion of the cloth was found to contain zinc chloride.
- (941) THIBIERGE, G., and LACASSAGNE, J.
1926. DERMITES ECZÉMATIFORMES DUES AU PORT DE FOURRURES TEINTES. [An eczema-like dermatitis caused by wearing dyed furs.] *Presse Méd.* [Paris] 34: [1009]-1011.
Six cases of an eczematoid eruption due to wearing dyed furs are reported. The morphological characteristics of the rash, its appearance and location on the body, duration, and treatment are discussed.
- (942) THOINOT, [L.], CHASSEVANT, and BALTHAZARD.
1909. SUSPICION D'EMPOISONNEMENT PAR LES CHAUSSURES. [Suspicion of poisoning by shoes.] *Ann. Hyg. Pub. et Méd. Lég.* (4) 11: 52-58.
An autopsy on a subject whose death had been attributed to poisoning from shoe leather, led to the conclusion that death was caused by pneumonia.
- (943) TOWNSEND, E. H.
1926. SHOE-DYE POISONING; REPORT OF CASE. *Wis. Med. Jour.* 25: 443.
Short report of a case of poisoning caused by wearing shoes immediately after dyeing them with an aniline-containing dye.
- (944) TRIBET, J.
1901. EMPOISONNEMENT PAR LE VERNIS AU NOIR D'ANILINE APPLIQUÉ À LA CHAUSSURE. [Poisoning by a black polish containing aniline applied to shoes.] 78 p. Dijon. (Thèse no. 135, Faculté Méd. et Pharm. Lyon.)
Four cases of poisoning from shoe dyes are reported on pages 58 to 69. The author draws the following conclusions: Serious trouble may be produced by shoe polish with an aniline base; the poisoning depends on heat, humidity, perspiration, and individual reaction; although the use of such dyes is dangerous and should be regulated by the State, poisoning does not result if evaporation is complete and the shoes are not worn until some time after dyeing.
- (945) TROTMAN, S. R.
1928. SKIN IRRITATION CAUSED BY TEXTILE FABRICS. *Textile Recorder* 45 (541): 70, 65.
Investigation of a large number of cases showed that woolen underclothing and hosiery, dyed and undyed, are frequent causes of skin irritation. Low-grade wool may contain sulphurous acid from the stoving process. In dyed hosiery unremoved sulphuric acid or mineral salts, chiefly chromium, used for mordanting, may cause trouble. Septic sores are occasionally traced to pathogenic bacteria which must have found access to the finished garment. Outbreaks of dyed-fur dermatitis are caused chiefly by the incomplete removal of phenylenediamine. Mercuric nitrate and copper and zinc salts used in the felting of velour hats may cause dermatitis on the exposed portions of the neck.
- (946) TUNNICLIFFE, F. W., and ROSENHEIM, O.
1901. DERMATITIS FROM ARSENIC IN STOCKINGS. *Lancet* [London] 1901 (1): 1199-1200.
Two cases of eruption on feet and legs caused by dyed stockings are reported. The dye still contained a large percentage of the arsenic acid which had been used in its preparation.

(947) ULLMANN, H.

1926. CYANVERGIFTUNG DURCH EIN SCHUHPUTZMITTEL. [Cyanide poisoning from a shoe polish.] Deut. Med. Wchnschr. 52: 451-452.

Examination of an American shoe polish for brocade and silver shoes showed the presence of hydrocyanic acid, which is considered responsible for a general condition of discomfort, exhaustion, headache, and nausea among the girls working in a shoe shop which used this polish.

(948) ———.

1926. ANILIN UND NITROBENZOLVERGIFTUNGEN DURCH SCHUHSCHWÄRMITTEL. [Aniline and nitrobenzene poisoning through shoe blackening.] Deut. Med. Wchnschr. 52: 998-1001.

Review and discussion of the literature on shoe-dye poisoning. The symptoms of poisoning by aniline and nitrobenzene are very similar and are described in detail. The author calls attention to the facts that children are specially susceptible to shoe-dye poisoning and that girls and women are somewhat more frequently affected than men.

(949) ———.

1926. BLAUSÄUREVERGIFTUNG DURCH EIN SCHUHPUTZMITTEL, ZUGLEICH EIN BEITRAG ZUR FRAGE DER AKUTEN UND CHRONISCHEN BLAUSÄUREVERGIFTUNG. [Hydrocyanic acid poisoning from a shoe polish, together with a contribution to the question of acute and chronic hydrocyanic acid poisoning.] Aertztl. Sachverständigen-Ztg. 32: [85]-97.

Detailed discussion of material previously published by the author. (See 947.) A large bibliography on hydrocyanic acid poisoning in general is included.

(950) VIAUD-GRAND-MARAIS, A.

1869. FAIT POUR SERVIR À L'HISTOIRE DE L'EMPOISONNEMENT PAR LES TISSUS ANGLAIS DE COULEUR CARMINEE. [Case to serve as history of poisoning by red English fabric.] Gaz. Hôpitaux Civils et Mil. 42: 82-83.

Detailed history of a case of poisoning due to wearing a rose-amaranth shirt.

(951) ———.

1873. DES ACCIDENTS PRODUITS PAR L'EMPLOI SUR LA PEAU DE CHEMISES DE LAINE AUX COULEURS D'ANILINE. [Some diseases produced by the use on the skin of wool underwear colored with an aniline dye.] Gaz. Hôpitaux Civils et Mil. 1873: 108-109, 116, 123, 131-132, 140, 307, 331-332.

The author discusses methods of manufacturing some of the aniline dyes and cites cases of poisoning caused by them.

(952) W., VON.

1899. HAUTAUSSCHLÄGE UND VERGIFTUNGEN DURCH GEFÄRBTE KLEIDUNGSTOFFE. [Skin eruption and poisoning due to dyed clothing fabrics.] Kurberichte Erfolge Phys. Diätet. Heilfaktoren, Leipzig 3: 211-212.

The author comments on the case of poisoning from a green tarlatan dress (see 863, 894, and 922) and on Weyl's reports. (See 957.) The apparent sensitivity of some individuals to textile fabrics and leather dyed with aniline dyes applied with a mordant is pointed out.

(953) WALSH, D.

1924. THE LATENT INTERVAL IN FUR DERMATITIS. Lancet [London] 207: 937-938.

The writer holds, as does Parsons (see 771), that the eruption is due to improperly dyed furs and that it is not due to the hair of the fur but to the hide which has been saturated with a chemical irritant.

(954) WANKLYN.

1869. SOCK- AND SHIRT-POISONING. Brit. Med. Jour. 1869 (v. 1): 79.

Emphasizes the need of investigating the risks taken in wearing various articles dyed with magenta, a dyestuff of arsenical origin.

- (955) WEYL, T.
1889. UEBER SAFRANINVERGIFTUNG. [Concerning safranin poisoning.] Ztschr. Hyg. 7: [35]-43.
Reports of a case of local itching and eruption on a woman due to wearing a red and brownish-yellow striped waist, thought to contain safranin dye. Chemical properties of safranin and an experimental study of its effect on animals are reported.
- (956) ———.
1889. UEBER VERGIFTUNG DURCH GEFÄRBTE TEXTILFASERN. [Concerning poisoning through dyed textile fibers.] München. Med. Wchnschr. 36: 399-400.
Cites several cases of poisoning apparently due to wearing dyed textile fibers. The author considers that the poisoning is not caused by the dye itself but by the mordant and possibly by pathogenic microorganisms. The examples given support this view.
- (957) ———.
1892. THE COAL TAR COLORS, WITH ESPECIAL REFERENCE TO THEIR INJURIOUS QUALITIES AND THE RESTRICTION OF THEIR USE. A SANITARY AND MEDICO-LEGAL INVESTIGATION, WITH A PREFACE BY PROF. SELL. Translated with permission of the author, by Henry Leffmann. 154 p. Philadelphia, P. Blakiston, Sons & Co.
The original was published in Berlin in 1889 under the title, "Die Theerfarben mit besonderer Rücksicht auf Schädlichkeit und Gesetzgebung hygienisch und forensisch-chemisch untersucht. Mit einer Vorrede von Prof. Sell." On pages 24 to 25, cases are mentioned which were considered due to wearing garments dyed with fuchsin and corallin. The author considers the pure dyestuffs not poisonous, but the presence of arsenical compounds in the commercial products may cause poisonous effects.
- (958) WHARTON, H. T.
1884. "PRICKLY HEAT." Lancet [London] 1884 (v. 2): 190.
Reports a severe case of prickly heat which was cured by wearing during the whole summer, thick long-sleeved vests made entirely of wool instead of light short-sleeved India-gauze vests.
- (959) WHITE, R. P.
1909. POISONING FROM ANILINE BLACK ON SHOES. Lancet [London] 176: 349.
Holds that shoe-dye poisoning is due not to the free aniline in the dyes but to a salt of aniline, usually the hydrochloride.
- (960) ———.
1923. IMITATION CONEY SEAL SKIN FUR DERMATOSIS. Urologic and Cutaneous Rev. [St. Louis] 27: 409-414, illus.; the causes of fur dermatosis. Jour. State Med. 32: 16-24. 1924.
The author gives a list of the principal counterfeit furs and describes the various dyeing processes used to produce cheap furs. He concludes that the dyestuff and the faulty dyeing methods are responsible for fur dermatitis among those who work with and those who wear these furs, and that "imitation coney seal" causes the most trouble.
- (961) WILSON, E.
1869. DERMATITIS TOXICA FROM THE ANILINE DYE. Jour. Cutaneous Med. [London] 3: 44-49.
Reports in detail three cases of poisoning due to wearing stockings containing aniline dye. The toxic principle in the dye is thought to be soluble in perspiration.
- (962) WILSON, J. A., and GALLUN, A. F., Jr.
1924. CHEMISTRY AND COMFORT. RELATION BETWEEN THE CHEMICAL COMPOSITION OF LEATHER AND THE COMFORT OF SHOES MADE THEREFROM. Indus. and Engin. Chem. 16: 268-269, illus.
Reports the first of a series of investigations to determine the relation between comfort and the chemical composition

- (962) WILSON, J. A., and GALLUN, A. F., Jr.—Continued.
of leather. Shoes made from vegetable-tanned calf leather hold their shape better and are much more comfortable to wear than shoes of the same size and shape made from chrome calf leather. More water is absorbed by the chrome than the vegetable leather because of the higher protein and sulphuric acid content; the volume and area of the chrome leather increase accordingly.
- (963) WOOD, E. S.
1884. ARSENIC AS A DOMESTIC POISON. *Mass. Bd. Health Ann. Rpt.* 5: [213]–267.
Reports cases of poisoning due to arsenic in tarlatan, linen collars, and a hat lining.
- (964) WOODLAND, J.
1882. POISONING FROM RED STOCKINGS. *Med. Rec.* [New York] 22: 616.
Short account of poisoning caused by a tin salt which was used as a mordant in fixing the dye in the stockings. An irritating solution was formed by the action of the excretions from the feet on the tin salt.
- (965) YARROW, H. C.
1869. POISONOUS DYES. *Med. and Surg. Rptr.* [Lancaster] 20: 326.
Reports a case of poisoning due to wearing a colored flannel sack lined with silk except for the seams of the sleeves. The exposed seams produced a longitudinal eruption upon the inner side of the left arm near the bend of the elbow.

PHYSICAL PROPERTIES

AIR PERMEABILITY

- (966) ANONYMOUS.
1928. VENTILATION THROUGH PROPER UNDERWEAR. *Canad. Textile Jour.* 45: 465.
Quotes E. R. Clark, a fellow of Mellon Institute of Industrial Research, concerning the importance of the fundamental physical laws in the designing of underwear.
- (967) CLARK, E. R.
1928. HYGIENIC VALUE OF VENTILATED CLOTHING. *Textile Colorist* 50: 412.
As a result of a study on the effect of ventilation on the body, the author, fellow of the Mellon Institute of Industrial Research, recommends loosely constructed garments of woven cotton fabrics. Improperly ventilated and too tight clothing decrease the mental and physical vitality of the wearer.
- (968) FOUCAUT, A.
1867. NOTE SUR LES VÊTEMENTS IMPERMÉABLES AUTO-PNEUMATIQUES À L'USAGE DES GENS DE MER. [Note on auto-pneumatic impermeable garments for the use of seamen.] *Arch. Méd. Navale* 7: 129–137.
Describes a waterproof garment with an attached apparatus which creates a circulation of air to ventilate the body and evaporate perspiration.
- (969) HERZOG, G.
1912. ÜBER DIE PRÜFUNG DER LUFTDURCHLÄSSIGKEIT VON GEWEBEN. [Testing the air permeability of fabrics.] *Mitt. K. Materialprüfungsamt Grosslichterfelde West* [Berlin] 30: 309–319, illus.
Apparatus and experimental method for determining air permeability are discussed at length. Both wet and dry fabrics were studied.
- (970) KISSKALT, C.
1902. ÜBER DIE ABSORPTION VON GASEN DURCH KLEIDUNGSGESTOFFE. [The absorption of gases by clothing materials.] *Arch. Hyg.* 41: [197]–203.
A study of the absorption of ammonia, hydrogen chloride, and hydrogen sulphide by different wool and cotton fabrics.

- (971) LEHMANN, K. B.
1906. *UNTERSUCHUNGEN ÜBER DIE AUFNAHME VON GASEN (NAMENTLICH AMMONIAK) UND WASSERDAMPF DURCH KLEIDUNGSSTOFFE.* [Investigation on the absorption of gases (especially ammonia) and of water vapor through clothing materials.] Arch. Hyg. 57: [273]-292.
Confirmation as well as expansion and correction of the work of Kisskalt and Yokote. With a new experimental method the author investigated the absorption of dry and moist ammonia by dry fabrics and by fabrics of known moisture content, and also carried out some new investigations on the absorption of hygroscopic water.
- (972) LEROY, G. A.
1915. *L'EXPERTISE DE L'IMPERMÉABILISATION DES TISSUS.* [The determination of the impermeability of cloth.] Ann. Falsif. 8: 377-385, illus. (Reviewed in Chem. Abs. 9: 2595-2596.)
Describes a method for measuring impermeability, based on the absorption by potassium hydroxide of carbon dioxide from a definite quantity of air-carbon dioxide moisture.
- (973) RUBNER, M.
1896. *APPARAT ZUR DEMONSTRATION DER LUFTDURCHGÄNGIGKEIT VON KLEIDUNGSSTOFFEN.* [Apparatus for demonstrating the permeability to air of clothing materials.] Arch. Hyg. 27: [41]-43, illus.
Describes an apparatus for lecture demonstrations designed to show the effect of thickness and weave of fabrics on their permeability to air.
- (974) ————
1896. *UEBER DIE PERMEABILITÄT DER KLEIDUNGSSTOFFE.* [The permeability of clothing materials.] Arch. Hyg. 27: [249]-263, illus.
Discusses the hygienic importance of air permeability of clothing. Experimental method for measuring air permeability and results of many measurements on different clothing materials are given.
- (975) SCHIERBECK, N. P.
1893. *EINE METHODE ZUR BESTIMMUNG DER VENTILATION DURCH EINE KLEIDUNG.* [A method for determining the ventilation through clothing.] Arch. Hyg. 16: [203]-237, illus.
Describes a method for comparing the ventilation through the different garments or combination of garments of an individual. This method is based on the effect of ventilation on the carbon-dioxide content of the layer of air between the skin and the first layer of clothing.
- (976) SCHMIDT, P.
1909. *ZUR BESTIMMUNG DER LUFTDURCHLÄSSIGKEIT VON KLEIDUNGSSTOFFEN.* [Determination of the air permeability of clothing materials.] Arch. Hyg. 70: [8]-16, illus.
The passage of air through the cloth tested followed the law of capillary flow, the volume being directly proportional to the pressure and indirectly to the resistance. The experimental method is described.
- (977) WOLPERT, H.
1896. *UEBER DEN KOHLENSÄUREGEHALT DER KLEIDERLUFT.* [The carbon dioxide content of the layer of air between the skin and the clothing.] Arch. Hyg. 27: [291]-307, illus.
A study of the influence of activity of the subject of air motion, and of the place of observation of the body on the carbon-dioxide content of the air between the skin and the clothing. Different head coverings were also investigated. The experimental method is described.

(978) YOKOTE, C.

1904. ÜBER ABSORPTION VON GASEN DURCH KLEIDUNGSTOFFE. [Absorption of gases through clothing materials.] Arch. Hyg. 50: [128]-157.

A study of the influence of textile material, concentration of gas and solution, time, temperature, humidity, hygroscopic water, finish, and washing, on the absorption of ammonia by twelve different wool and cotton fabrics.

HEAT CONDUCTIVITY

(979) ANONYMOUS.

1879. RED CAPS AND SUMMER HEAT. Boston Med. and Surg. Jour. 101: 30-31.

Contents that red caps worn by the soldiers' messenger corps overheat the head.

(980) ATLEE, L. W.

1884. OUR CLOTHING AND OUR HOUSES. Jour. Franklin Inst. 118: 263-279.

The discussion is based on an article by Radau in La Revue des deux Mondes. (See 1039.)

(981) BACHMANN, [W.]

1928. UEBER DIE BESTIMMUNG DES WÄRMEHALTUNGSVERMÖGENS VON BEKLEIDUNGSTOFFEN MIT HILFE DES HILL'SCHEN KATATHERMOMETERS. [Concerning the determination of the heat retaining properties of clothing fabrics with the aid of Hill's katathermometer.] Deut. Med. Wchnschr. 54: 146-147.

Reports tests on the heat-retaining properties of women's silk hosiery, "Baumwollnessel," combination silk lining and suiting fabrics at 19.5° and 18.3° C. The results suggested that the degree of error could be decreased by a modified katathermometer, with a larger surface and a slower rate of cooling than Hill's. To approximate the skin temperature of clothed human beings, an average temperature of 33° has been chosen for the new instrument.

(982) ———.

1929. ZUR BESTIMMUNG DES WÄRMEHALTUNGSVERMÖGENS VON BEKLEIDUNGSTOFFEN. [Concerning the determination of the heat conductivity of clothing materials.] Deut. Med. Wchnschr. 55: 319.

Attributes the disagreement in results obtained with the Davos frigorimeter and the katathermometer to the fact that the former has a greater radiating power. (See 1031.)

(983) BALLS-HEADLEY, W.

1876. DRESS, WITH REFERENCE TO HEAT; BEING A LECTURE WRITTEN FOR AND PUBLISHED BY THE AUSTRALIAN HEALTH SOCIETY. 39 p. Melbourne, J. & A. McKinley.

Part 1 contains a general theoretical consideration of natural heat conditions and the behavior of ordinary textile fabrics on exposure to heat and moisture. Part 2 discusses the practical application of the theory and considers what is rational clothing for men, women, and children.

(984) BAUER, O.

1915. VERFAHREN ZUR BESTIMMUNG DER WÄRMEDURCHLÄSSIGKEIT VON GEWEBEN. [A method for determining the heat conductivity of clothing materials.] Mitt. K. Materialprüfungsamt Berlin-Lichterfelde West 33: 290-305, illus.

Relative values for heat conductivity of clothing materials were determined by comparing the rate of temperature rise between a source of heat and a thermoelement with and without the test clothing inserted. Experimental data are given.

(985) BENEDICT, F. G.

1925. DIE TEMPERATUR DER MENSCHLICHEN HAUT. [The temperature of the human skin.] Ergeb. Physiol. 24: [594]-617, illus.

A detailed account of the experiments reported in 986.

(986) BENEDICT, F. G.—Continued.

1925. SKIN TEMPERATURE AND HEAT LOSS. *Natl. Acad. Sci. Proc.* 11: 549-552.

"A survey of the skin temperature was made (a) after a night's rest in bed, when the subjects (12 girls 14 years of age) were well covered with bed clothing; (b) under the clothing after the subjects had been lying for two or three hours in a known environmental temperature; (c) under the clothing with the subjects standing, after 4 to 6 hours in the temperature of the laboratory; and (d) under the clothing after prior exposure to external weather conditions."

(987) ——— and PARMENTER, H. S.

1929. HUMAN SKIN TEMPERATURE AS AFFECTED BY MUSCULAR ACTIVITY, EXPOSURE TO COLD, AND WIND MOVEMENT. *Amer. Jour. Physiol.* 87: 633-653, illus.

Reports a study of the skin temperature of 26 healthy normal women under different conditions of muscular activity. Many of the skin temperatures reported were measured under clothing.

(988) ———, MILES, W. R., and JOHNSON, A.

1919. THE TEMPERATURE OF THE HUMAN SKIN. *Natl. Acad. Sci. Proc.* 5: 218-222, illus.

Describes a thermoelectric method for determining surface temperatures and reports measurements of skin temperatures under the clothing of a normally clothed woman. The effect of environmental temperature upon the skin temperature without clothing was also studied.

(989) BERGONIE, J.

1904. DE LA RÉSISTANCE THERMIQUE OU COEFFICIENT D'UTILITÉ DES VÊTEMENTS CONFECTIONNÉS. [The thermal resistance of coefficient of utility of ready-made clothing.] *Compt. Rend. Soc. Biol. [Paris]* 56 (Tome 1): 265-266.

Describes a method and calorimeter for comparing the resistance of different clothing to heat transmission. The method consists of comparing the rates of cooling of a copper bust, filled with water at 37° C. in an atmosphere of 25° when bare and when covered with different quantities of clothing.

(990) ———.

1904. SUR QUELQUES COEFFICIENTS D'UTILITÉ PRATIQUE DES VÊTEMENTS CONFECTIONNÉS. [Some coefficients of practical utility of ready-made garments.] *Compt. Rend. Soc. Biol. [Paris]* 56 (Tome 1): 431-433.

Reports some determinations of heat regulation by garments using the apparatus previously described. (See 989.)

(991) ———.

1904. ESSAI DE DÉTERMINATION EXPÉRIMENTALE DU VÊTEMENT RATIONNEL. [An attempt at an experimental determination of rational clothing.] *Compt. Rend. Acad. Sci. [Paris]* 138: 273-274.

Discusses a method for experimentally determining suitable clothing with regard to heat regulation of the human body. See 989 and 990.

(992) BERTHERAND, E. L.

1869. LES COIFFURES D'ÉTÉ EN ALGÉRIE. [Summer headdress in Algeria.] *Gaz. Méd. Algérie* 14: 72-74, illus.

Describes three types of white headwear useful in hot climates.

(993) BLACKHAN, R. J.

1913. THE SOLDIER'S HEAD-RESS. *Jour. Roy. Army Med. Corps* 21: 670-675.

Description of experiments on heat conductivity of five kinds of helmets for hot countries, including a soldier's ordinary helmet lined with red calico.

- (994) BLEULER, E., and LEHMANN, K. B.

1885. UEBER EINIGE WENIG BEACHTETE, WICHTIGE EINFLÜSSE AUF DIE PULSZAHL DES GESUNDEN MENSCHEN. [Several little-observed important influences on the pulse number of healthy human beings.] Arch. Hyg. 3: [215]-248.

Part 2, Einfluss der Bedeckung des Körpers [influence of covering the body], reports experiments showing that the pulse rate is considerably increased by heavy covering, whereas exposure of the naked body to a lower temperature reduces the frequency.

- (995) BORDIER, H., and KOLB, P.

1899. DE LA CONDUCTIBILITÉ, CALORIFIQUE DES ÉTOFFES EMPLOYÉES POUR LES UNIFORMES DE L'ARMÉE. [The calorific conductivity of materials used for army uniforms.] Jour. Physiol. et Path. Gén. 1: [94]-102, illus.

Results of laboratory experiments on the conductivity of various army uniform materials.

- (996) CAMPBELL, J. A., and ANGUS, T. C.

1928. PHYSIOLOGIC REACTIONS OF RESTING SUBJECTS TO COOLING POWER AND EFFECTIVE TEMPERATURE. Jour. Indus. Hyg. 10: 331-349, illus.

Reports a study of the pulse rate, temperature, perspiration (insensible and sensible), metabolism, and heat loss of naked and clothed resting subjects while they were exposed to dry bulb temperatures at about 20°, 25°, 30°, and 35° C. in still and moving air, and in relatively dry and moist atmospheres. The comparative values of the katathermometer and the effective temperature method were studied as indicators of atmospheric conditions suitable for human beings.

- (997) CARRINGTON, T. S.

1912. FRESH AIR AND HOW TO USE IT. 250 p. illus. New York, The National Association for the Study and Prevention of Tuberculosis.

The physical properties affecting the warmth of clothing are given. Clothing for outdoor living and sleeping with particular reference to protecting the hands, feet, and head is suggested.

- (998) CLEVELAND, W. F.

1896. PROPHYLACTIC CLOTHING OF THE BODY CHIEFLY IN RELATION TO COLD. 15 p. London, H. K. Lewis.

Flannel varying in thickness is recommended for use throughout the year.

- (999) COBET, R.

1926. DIE HAUTTEMPERATUR DES MENSCHEN. [The skin temperature of human beings.] Ergeb. Physiol. 25: [439]-516, illus.

Compilation and critical review of the literature of skin temperatures of human beings, and a critical discussion of the methods of measuring and the factors influencing skin temperatures. The effect of clothing is considered on pages 461 to 464.

- (1000) COQUOZ, R.

1917. LA TEMPÉRATURE SOUS LES DIFFÉRENTS COUVRE-CHEFS MILITAIRES ET CIVILS. [The temperature under the different head coverings, military and civilian.] 71 p. Lausanne. (Thèse.)

Experimental study of the effect of different kinds of hats on the temperature of the head especially with respect to sunstroke and heat stroke.

- (1001) CORSON, J. F.

1926. THE PROTECTION OF THE HEAD AGAINST THE SUN'S RAYS IN TROPICAL AFRICA. Jour. Trop. Med. and Hyg. [London] 29: 2-3.

Reports observations on the temperature inside different types of men's and women's hats to determine whether a lighter head covering than the customary helmet could be worn safely in tropical Africa.

(1002) CORSON, J. F.—Continued.

1926. A NOTE ON FURTHER EXPERIENCES OF THE USE OF A PANAMA HAT IN TROPICAL AFRICA. *Jour. Trop. Med. and Hyg.* [London] 29: 303-304.

Continuation of experiments reported in the preceding citation. (See 1001.) A Panama hat was used under more severe conditions; namely, exposure for several hours during the hottest part of the day. It was found to be an efficient substitute for the usual helmet. Data on the possibility of differences in individuals are not yet available.

(1003) DHAR, N. R.

1926. INFLUENCE OF TEMPERATURE ON METABOLISM AND THE PROBLEM OF ACCLIMATIZATION. *Jour. Phys. Chem.* 30: [480]-490.

Discussion of the literature, especially of Rubner's experimental work on the influence of temperature on metabolism. The importance of clothes as a factor in the heat regulation of man is pointed out.

(1004) DUNCAN, A.

1907. THE ACTINIC THEORY OF SUNSTROKE. *Jour. Trop. Med. and Hyg.* [London] 10: 83.

Several experiences are cited and on them as a basis the author strongly urges lining soldiers' helmets and khaki coats with orange-red material as a protection against sunstroke.

(1005) FLOYD, E. V., and BAKER, L.

1927. THE PROTECTIVE VALUE OF CLOTHING FABRICS. *Textile World* 71: 1581-1582, 1601, illus.

Results of a calorimeter study carried out at Kansas State Agricultural College on a variety of wool, cotton, and mixed fabrics to determine how clothing made from one fabric keeps its wearer warmer than clothing from another. The volume of enmeshed air appears to be the most important factor in determining the protective value.

(1006) ———, HESS, K., and BAKER, L.

1927. THE PROTECTIVE RATIO OF CERTAIN CLOTHING FABRICS AGAINST HEAT LOSS FROM THE BODY WHEN AIR IS IN MOTION. (Abstract) *Jour. Home Econ.* 19: 597.

Preliminary report of work supplementary to that cited in the preceding reference. Blue flannel and canton flannel were compared and studied in seven speeds of wind and various humidities. Other fabrics are being studied.

(1007) FOOS, I. D.

1926. HEAT TRANSMISSION OF FABRICS. *Textile World* 70: 3151.

Encourages the industries to continue the study started by the Bureau of Standards, U. S. Department of Commerce, on the heat transmission of fabrics. Many possibilities of such a study are suggested. See 1062 for description of apparatus.

(1008) FORBES, G.

1875. ON THE THERMAL CONDUCTIVITY OF ICE, AND A NEW METHOD OF DETERMINING THE CONDUCTIVITY OF DIFFERENT SUBSTANCES. *Roy. Soc. Edinb. Proc.* (1872-73) 8: 62-68.

For determining the conductivity of various substances, a novel method dependent upon the rate of formation of ice by a freezing mixture is used. Raw cotton, flannel, and coarse linen were examined. Values for cotton wool are compared with those found by Péclet. The conductivity of cotton wool was found to be independent of the compression. The author concludes that the conductivity of the fiber is the same as that of air.

(1009) GEIGEL, R.

1884. WÄRMEREGULATION UND KLEIDUNG. [Heat regulation and clothing.] *Arch. Hyg.* 2: [318]-334, illus.

The heat given off by the body when clothed and when unclothed was studied with a specially devised apparatus.

(1010) GIBBS, H. D.

1912. A STUDY OF THE EFFECT OF TROPICAL SUNLIGHT UPON MEN, MONKEYS, AND RABBITS, AND A DISCUSSION OF THE PROPER CLOTHING FOR THE TROPICAL CLIMATE. *Philippine Jour. Sci. (B)* 7: 91-114, illus.

Reports the measurement, by means of thermocouples, of skin temperatures in the tropical sun. The temperatures were taken under the hair and under various kinds of clothing on individuals of various races. On the basis of these observations, the author recommends that tropical clothing should be selected which affords the greatest amount of shade with the least obstruction to air currents. A large white umbrella with a green lining, supplemented by as little clothing as possible is ideal. A broad-brimmed, lightweight white helmet with band so arranged that the frame does not touch the head but permits air circulation, is the best substitute for the umbrella.

(1011) GREGORY, J.

1926. AN EXPERIMENTAL METHOD FOR INVESTIGATING THE THERMAL PROPERTIES OF COTTON FABRICS. *Jour. Textile Inst.* 17: T553-T566, illus.

Some experimental methods are described for studying and comparing the thermal properties of fabrics. The effects of moisture and washing were studied.

(1012) GRIMM, H., and BÜLTZINGSLÖWEN, C. VON.

1896. UEBER DAS WÄRMELEITUNGSVERMÖGEN DER ZUR MILITÄRKLIEDUNG DIENENDEN STOFFE. [The heat conductivity of materials used for military clothing.] *Arch. Hyg.* 27: [105]-118.

Heat conductivity of different articles of military clothing was investigated. The effect of wear was also considered.

(1013) HADDON, J.

1878. CLOTHING, AND ITS RELATION TO HEALTH AND DISEASE. Health lectures delivered in Manchester (1875-1878) 1: 165-188.

Deals primarily with the relation of clothing to the temperature regulation of the body.

(1014) HALDANE, J. S.

1905. THE INFLUENCE OF HIGH AIR TEMPERATURES. No. 1. *Jour. Hyg. [London]* 5: 494-513.

Reports an investigation of the effects of various air temperatures and humidities on the body temperature under different circumstances of clothing, air currents, and work.

(1015) HARTMANN, J.

1892. UEBER DIE DURCHLÄSSIGKEIT VERSCHIEDENER HAUT-BEKLEIDUNGSTOFFE FÜR WÄRME. [The permeability of various clothing materials to heat.] *Arch. Hyg.* 14: [380]-408, illus.

The author modified Schuster's method for studying the heat regulation by clothing, and confirmed his results. He showed that the heat regulation depends chiefly upon the weave and the manner of wrapping (tight, loose, or pleated), rather than on the nature of the fiber itself.

(1016) HAVEN, G. B.

1917. TESTING BLANKETS FOR HEAT TRANSMISSION. *Textile World Jour.* 52: [3307]-3309, illus.

Describes experimental procedure for determining heat transmission through fabrics and special apparatus for measuring thickness. The results suggest that thickness and quantity of air enmeshed are more important factors than the nature of the material.

(1017) HERBERT, T.

1885. THE QUESTION OF CLOTHING. *New Orleans Med. and Surg. Jour. (n. s.)* 12: 500-507.

Discusses clothing selection on the basis of color. Advocates white clothing for winter and dark clothing for summer.

- (1018) HILL, L.
1920. THE SCIENCE OF VENTILATION AND OPEN AIR TREATMENT. Part 2. 295 p., illus. London, His Majesty's Stationery Office. ([Gt. Brit.] Med. Research Council, Spec. Rpt. Ser. no. 52.)
In chapter 7, pages 83 to 91, experimental data on the surface temperatures of white and colored clothing and black fur are reported.
- (1019) HILLER, A.
1885. UEBER ERWÄRMUNG UND ABKÜHLUNG DES INFANTERISTEN AUF DEM MARSCH UND DEN EINFLUSS DER KLEIDUNG DARAUF. [The heating and cooling off of infantry on the march and the influence thereupon of clothing.] Deut. Militärärztl. Ztschr. 14: [309]-380.
Reports data on the highest temperature in the different garments worn by marching infantry with regard also to air temperature, weather, time of day, season, and work. The measurements were made with a maximum thermometer.
- (1020) HOUGHTEN, F. C., and YAGLOGLU, C. P.
1923. DETERMINING EQUAL COMFORT LINES . . . Jour. Amer. Soc. Heating and Ventilating Engin. 29: 165-176, illus.
Clothing is considered incidentally in this study to determine comfortable conditions with regard to humidity and temperature.
- (1021) ——— TEAGUE, W. W., and MILLER, W. E.
1926. EFFECTIVE TEMPERATURE FOR PERSONS LIGHTLY CLOTHED AND WORKING IN STILL AIR. Jour. Amer. Soc. Heating and Ventilating Engin. 32: 473-478, illus.
Observers, clothed in shoes, lightweight shirts, and trousers, compared their feelings of warmth while working in two atmospheres, one of high dry-bulb temperature and low relative humidity, and the other of low dry-bulb temperature and a higher relative humidity.
- (1022) KRIEGER.
1869. UNTERSUCHUNGEN UND BEOBACHTUNGEN ÜBER DIE ENTSTEHUNG VON ENTZÜNDLICHEN UND FIEBERHAFTEN KRANKHEITEN. [Investigations and observations on the origin of inflammatory and feverish illnesses.] Ztschr. Biol. 5: [476]-535, illus.
The rôle of clothing is discussed on page 516ff. The ability of clothing to radiate, conduct, and absorb heat was studied. Tin cylinders filled with warm water were covered with different and with differently arranged materials, including linen, wool, cotton, silk, wash leather, and india rubber, and the rate of decrease of temperature noted. Cylinders were also covered with shorn and unshorn fur, and with shorn fur coated with linseed oil and with gum-arabic varnish.
- (1023) McCLURE, W. B., and SAUER, L. W.
1915. CLOTHING AS A FACTOR IN THE PRODUCTION OF HEAT STASIS. Amer. Jour. Diseases Children 9: [490]-507, illus.
Experiments were carried out on puppies wearing jackets of different clothing material and placed in an incubator such as is used for premature babies. At moderately high temperatures, the clothing interfered with the heat loss from the body to such a degree as to cause death.
- (1024) ——— and SAUER, L. W.
1915. THE INFLUENCE OF CLOTHING ON THE SURFACE TEMPERATURE OF INFANTS. Amer. Jour. Diseases Children 10: [425]-435, illus.
A study of the influence of clothing on the heat-regulatory power of infants. The skin temperatures of infants, clothed and unclothed at moderate and at high room temperatures, were measured with thermocouples. The apparatus used for measuring skin temperatures is described.

- (1025) McCONNELL, W. J., and YAGLOGLOU, C. P.

1924. CORRELATION OF SKIN TEMPERATURES AND PHYSIOLOGICAL REACTIONS. Jour. Amer. Soc. Heating and Ventilating Engin. 30: 457-463, illus.

Thermocouple and applicator for measuring skin temperatures are described. Effective temperatures are plotted against the average skin temperatures of five subjects "lightly dressed, wearing trousers and shirt" after two hours rest in a well-ventilated room.

- (1026) ——— and YAGLOU, C. P.

1926. WORK TESTS CONDUCTED IN ATMOSPHERES OF LOW TEMPERATURES IN STILL AND MOVING AIR. Jour. Amer. Soc. Heating and Ventilating Engin. 32: 375-386, illus.

A study of the physiological reactions of men doing measurable amounts of work at a constant rate in still and in moving air at ordinary and low temperatures. Clothing is discussed incidentally.

- (1027) McDOWALL, C. J. F.

1865. WHAT TO WEAR IN INDIA. . . . 24 p. Bombay, Thacker, Vining & Co.; London, W. Thacker & Co.

Suitable clothing for wear in India is suggested on the basis of its physical properties with regard to the heat regulation of the human body.

- (1028) MAUREL, E.

1904. ACTION DU VÊTEMENT SUR LE COBAYE TONDU. [Action of clothing on the shorn guinea pig.] Compt. Rend. Soc. Biol. [Paris] (Tome 1) 56: 978-980.

A short experiment on a shorn guinea pig with and without a covering, to determine the effect of clothing on the loss or gain of weight.

- (1029) MENDELSSOHN, A.

1912. BEOBSACHTUNGEN ÜBER HAUTTEMPERATUREN DER SÄUGLINGE. [Observations on the skin temperature of infants.] Ztschr. Kinderheilk. 3: [292]-308, illus.

Reports studies of the skin temperatures of well and sick infants. Data were obtained when the children were clothed and also unclothed, but no details are given in regard to the types of fabrics or garments worn.

- (1030) MOUCHET, R.

1911. NOTE SUR LA VALEUR HYGIÉNIQUE DES DIFFÉRENTES ÉTOFFES EMPLOYÉES POUR LES VÊTEMENTS COLONIAUX. [Note on the hygienic value of different materials used for clothing in the colonies.] Arch. Schiffs-u. Tropen-Hyg. 15: 60-64.

Experimental study and comparison of the heat conductivity of different kinds and colors of fabrics for use in tropical regions. White and khaki fabrics of different thicknesses and also Solara fabrics were studied. (See 436 and 1063.)

- (1031) MÜLLER, A.

1926. DIE ANWENDUNG DES "DAVOSER FRIGORIMETERS" ZUR BESTIMMUNG DES WÄRMEHALTUNGSVERMÖGENS VON KLEIDERSTOFFEN. [Application of the "Davos frigorimeter" to the study of thermal properties of clothing materials.] Arb. Reichsgsundtsamt [Germany] 57: [314]-317.

Fabrics used for men's and women's stockings were examined by the Davos frigorimeter in both still and moving air at temperatures around 8° C. The apparatus is described.

- (1032) ———.

1928. ZUR BESTIMMUNG DES WÄRMEHALTUNGSVERMÖGENS VON BEKLEIDUNGSSTOFFEN. [Concerning the determination of the heat conductivity of clothing materials.] Deut. Med. Wchnschr. 54: 2112.

In defense of the Davos frigorimeter method for determining the heat conductivity of textile fabrics. Contends that this method is decidedly more suited to the purpose than the katathermometer method. (See Bachmann 981 and 982.)

- (1033) NOTHWANG, F.
1892. UEBER DEN WÄRMEVEVLUST DES BEKLEIDETEN FUSSES DURCH CONTACT MIT DEM BODEN. [The loss of heat from the clothed foot in contact with the ground.] Arch. Hyg. 15: [314]-330.
The heat given off by the foot when bare and when clothed in various types and combinations of shoes and stockings was measured calorimetrically. Wet and dry shoes, and stockings wet in oil and in sodium chloride solution were also compared. The experimental data recorded are extensive.
- (1034) PÉCLET, E.
1860. TRAITÉ DE LA CHALEUR CONSIDÉRÉE DANS SES APPLICATIONS. [Treatise on heat with regard to its applications.] Ed. 3, entirely rewritten, v. 1, 476 p., illus. Paris, Librairie de Victor Masson.
The chapter, Conductibilité des corps mauvais conducteurs (p. 395-407), includes a report of determinations made by the author on the heat conductivity of textile fabrics. Experimental methods are described.
- (1035) PHILLIPS, W. F. R.
1897. CLOTHING AND TEMPERATURE. U. S. Dept. Agr., Weather Bur. W. B. no. 126, 6 p.; (Reprint from U. S. Mo. Weather Rev. 25: 200-201; Sanitarian 39: [435]-438.)
Reports a series of observations on the temperature of different parts of the body and of the clothing. A thermometer was used.
- (1036) PINKERTON, R. E.
1915. A NEW IDEA IN WINTER CLOTHES. Outing 65: 495-497, illus.
The author finds the cotton parka the most satisfactory garment in cold dry winters.
- (1037) POLLOCK, C. F.
1888. BODILY HEAT AND CLOTHES. Chautauquan 8: 331-333, illus.
Discusses choice of clothing, including footwear, from the standpoint of the most suitable material, texture, color, and fit for retaining heat in cold climates and for protecting from the sun in hot climates.
- (1038) PRIESTMAN, H.
1921-22. HEAT-RETAINING PROPERTIES OF WOOLLEN AND WORSTED CLOTHS. Jour. Leeds Univ. Textile Assoc. 7: 35-39. (Reprinted in Textile Manfr. 48: 28-29. 1922. Textile World 62: 1426-1429. 1922. Abstract in Jour. Textile Inst. 12: 324. Original not seen.)
Reports an investigation in which samples of cloth were wrapped around copper cylinders containing hot water and the rate of cooling of the water measured. Experiments were also conducted in air currents produced by an electric blower. The effect of paper and of one, two, or three layers of cloth alone and with a layer of paper was studied.
- (1039) RADAU, R.
1883. LES VÊTEMENTS ET LES HABITATIONS DANS LEURS RAPPORT AVEC L'ATMOSPHERE. [Relation of the atmosphere to our clothing and dwellings.] Rev. Deux Mondes 58: 396-439. (Abridged translation entitled "Clothing and the Atmosphere." Pop. Sci. Mo. 23: 787-798.)
General consideration of the rôle of clothing as a regulator of the heat, moisture, and air relations between our bodies and the surrounding atmosphere. The experimental work of such scientists as Pettenkofer, Coullier, and Krieger is cited. The hygienic properties of wool are particularly considered.
- (1040) REGENT.
1913. THE PRINCIPLES OF WARMTH IN CLOTHING. Textile World Rec. 44: 532-534. (Reviewed in popular style Lit. Digest 46: 1222, under title "What makes clothes warm or cool?")
Discusses the relative warmth of children's sleeping garments of bleached and of unbleached cotton; the effect of an admixture of wool in such garments as an aid in carrying off moisture from the body; and the manner in which the perspiration is carried off from the body by bleached and unbleached cotton, wool, or a mixture of wool and cotton.

(1041) Rood, E. S.

1921. THERMAL CONDUCTIVITY OF SOME WEARING MATERIALS. *Phys. Rev.* (2) 18: 356-361.

The author measured the conductivity of knitted and woven cotton, wool, linen, and silk materials, using the disc method of Lees.

(1042) ROOSE, R.

1893. CLOTHING AS A PROTECTION AGAINST COLD. *Fortnightly Rev.* [London] (n. s. 54) 60: [842]-848.

Contends that the function of clothing is to preserve the heat generated by the body. Proper food and exercise are also essential. Discusses proper clothing for varying degrees of cold, use of waterproof clothing, and suitable night wear. Reviews the principal fibers and their properties.

(1043) RUBNER, [M.]

1893. VERGLEICH DES WÄRMESTRAHLUNGSVERMÖGENS TROCKENER KLEIDUNGSTOFFE. [Comparison of the heat-radiating powers of dry clothing materials.] *Arch. Hyg.* 16: [105]-121.

Critical review of the methods of Pécelet (see 1034) and Krieger. (See 1022.) Experimental data are given on the relative radiating power of different dry clothing materials. The method of determination is described.

(1044) ———.

1893. ABHÄNGIGKEIT DES WÄRMEDURCHGANGS DURCH TROCKENE KLEIDUNGSTOFFE VON DER DICKE DER SCHICHT. [Dependence of the heat passage through dry clothing materials on the thickness of the layer.] *Arch. Hyg.* 16: [353]-368, illus.

The heat lost by radiation from different clothing materials was measured with a thermopile. The first layer exerts a much greater hindrance to heat loss than succeeding ones. Curves illustrating this difference are given.

(1045) ———.

1893. DAS STRAHLUNGSVERMÖGEN DER KLEIDUNGSTOFFE NACH ABSOLUTEM MASSE. [The radiating power of clothing materials according to absolute measure.] *Arch. Hyg.* 17: [1]-16.

Absolute values for the heat radiation of different fabrics are reported for 1 square meter of surface for one hour at 15° C.

(1046) ———.

1895. THERMISCHE STUDIEN ÜBER DIE BEKLEIDUNG DES MENSCHEN. [Thermal studies on human clothing.] *Arch. Hyg.* 23: [13]-43, illus.

Study of the effect of fluctuations in the temperature of the air, and the thickness of the material on the skin temperature. Temperature measurements were carried out thermoelectrically.

(1047) ———.

1895. DAS WÄRMELEITUNGSVERMÖGEN DER GRUNDSTOFFE UNSERER KLEIDUNG. [The heat conductivity of the basic material of our clothing.] *Arch. Hyg.* 24: [265]-345.

Critical review of the literature beginning with Rumford (1787). Investigations were conducted with a Stephan calorimeter and with a specially constructed type ("Durchströmungs apparates"). The superiority of fiber materials over air as a heat conductor is established and the dependence of conductivity of different fabrics on the fiber itself, thickness, and specific gravity of the clothing material is demonstrated.

(1048) ———.

1895. DAS WÄRMELEITUNGSVERMÖGEN DER GEWEBE UNSERER KLEIDUNG. [The heat conductivity of the textile fabrics of our clothing.] *Arch. Hyg.* 24: [346]-389.

Reports further investigations on density, pore volume, and heat radiation of fabrics. The influence of weave is particularly considered. Experiments on furs lead to the conclusion that natural hair coverings are ideal because of the large amount of inclosed air.

(1049) RUBNER, [M.]—Continued.

1895. LUTTBEWEGUNG UND WÄRMEDURCHGANG BEI KLEIDUNGSTOFFEN. [Air motion and heat passage in clothing materials.] Arch. Hyg. 25: 1-28, illus.

Studied the effect of ventilation on heat conduction of fabrics of different fibers and weaves by means of the Leslie cube and thermopile. The fabrics include starched cotton as an example of a dense weave; cotton, wool, and silk tricots with weaves as nearly alike as possible in pattern and tightness; and wool flannel as a type of loosely woven fabric.

- (1050) ———. 1895. EINFLUSS DER FEUCHTIGKEIT AUF DAS WÄRMELEITUNGSVERMÖGEN DER KLEIDUNGSTOFFE. [Influence of moisture on the heat conductivity of clothing materials.] Arch. Hyg. 25: [29]-69.

Comparison of the heat conductivity of different fabrics in the dry and moist state with reference to air and to water. Moistening fabrics with olive oil does not have so great an influence as dampening with water.

- (1051) ———. 1895. DIE ÄUSSEREN BEDINGUNGEN DER WÄRMEABGABE VON FEUCHTEN KLEIDUNGSTOFFEN. [The external conditions for loss of heat from wet clothing materials.] Arch. Hyg. 25: [70]-100.

Exhaustive study of heat loss through radiation and evaporation. Compares radiation from wet and dry clothing. Evaporation and distribution of moisture in clothing are considered.

- (1052) ———. 1895. UEBER DEN WÄRMESCHUTZ DURCH TROCKENE KLEIDUNGSTOFFE NACH VERSUCHEN AM MENSCHLICHEN ARME. [The heat insulation by dry clothing materials according to investigations on the human arm.] Arch. Hyg. 25: [252]-285.

Study of the effect of air velocity, temperature, tightness of clothing, fiber, and clothing thickness on the protective power of clothing.

- (1053) ———. 1895. EINFLUSS DES STÄRKENS VON BAUMWOLLENSTOFF AUF DIE WÄRMEDURCHLÄSSIGKEIT. [Influence of starch of cotton material on the heat permeability.] Arch. Hyg. 25: [286]-293.

The experiments reported show the necessity of porous clothing fabrics; starched fabrics tend to decrease ventilation and hold back the moisture, thereby increasing the heat conductivity.

- (1054) ———. 1895. CALORIMETRISCHE VERSUCHE AM MENSCHLICHEN ARME BEI NASSER KLEIDUNG. [Calorimetric tests on the human arm with wet clothing.] Arch. Hyg. 25: [294]-308.

Wool flannel and wool, silk, and cotton tricots were investigated. Data are given on the effect of wetness on the heat conduction.

- (1055) ———. 1896. APPARAT ZUR DEMONSTRATION DER COMPRIMIRBARKEIT DER MENSCHLICHEN BEKLEIDUNGSTOFFE. [Apparatus for demonstrating the compressibility of the human clothing materials.] Arch. Hyg. 27: [49]-50, illus.

This apparatus was designed for lecture use in demonstrating the compressibility of clothing fabrics.

- (1056) ———. 1896. DIE COMPRIMIRBARKEIT DER KLEIDUNGSTOFFE IM TROCKENEN ZUSTANDE UND BEI GEGENWART VON FEUCHTIGKEIT. [The compressibility of clothing material in the dry state and in the presence of moisture.] Arch. Hyg. 27: [51]-68.

The spherometer was used in this study on the compressibility of clothing fabrics. The manner in which the fiber is worked up into the fabric is a more important factor than the fiber itself.

(1057) RUMFORD, COUNT OF. [BENJAMIN THOMPSON.]

1804. AN ENQUIRY CONCERNING THE NATURE OF HEAT, AND THE MODE OF ITS COMMUNICATION. Roy. Soc. [London] Phil. Trans. 94: 77-182, illus. (Reprinted in the Complete Works of Count Rumford 2: [23]-130, illus. Boston, Amer. Acad. Arts and Sci. 1875.)

Describes an instrument devised for determining the warmth of clothing and reports some experiments on the cooling of a cylinder covered with textile materials, glue, or colored paint. Discusses the application of the results to the selection of suitable fibers for clothing.

(1058) _____.

1870. OF THE PROPAGATION OF HEAT IN VARIOUS SUBSTANCES: BEING AN ACCOUNT OF A NUMBER OF NEW EXPERIMENTS MADE WITH A VIEW TO THE INVESTIGATION OF THE CAUSES OF THE WARMTH OF NATURAL AND ARTIFICIAL CLOTHING. The Complete Works of Count Rumford 1: [401]-468, illus. Boston, Amer. Acad. Arts and Sci.

Reports experiments undertaken to determine the relative heat-conducting power of silk, wool, linen, cotton, fur, and eiderdown. The effect of the density of the mass of fibers upon its heat-conductance was also studied.

(1059) _____.

1875. HISTORICAL REVIEW OF THE VARIOUS EXPERIMENTS OF THE AUTHOR ON THE SUBJECT OF HEAT. The Complete Works of Count Rumford 2: [188]-240, illus. Boston, Amer. Acad. Arts and Sci.

Contains data on the time required for the mercury to fall 10° C. when the bulb is wrapped in various quantities of textile fibers and placed in a cooling mixture.

(1060) RUMPEL.

1889. UEBER DEN WERTH DER BEKLEIDUNG UND IHRE ROLLE BEI DER WÄRMEREGULATION. [The value of clothing and its rôle in the heat regulation.] Arch. Hyg. 9: [51]-97, illus.

Calorimetric study of the effect of clothing on the heat loss of man.

(1061) RUTHERFORD, R. C.

1893. "HYGIENIC CLOTHING." N. Y. Med. Jour. 58: 628-632.

Discussion of an article by F. H. Daniels advocating wool clothing. (See 794.)

(1062) SALE, P. D.

1924. SPECIFICATIONS FOR CONSTRUCTING AND OPERATING HEAT-TRANSMISSION APPARATUS FOR TESTING HEAT-INSULATING VALUE OF FABRICS. U. S. Dept. Com., Bur. Standards Technol. Paper 269 (18, p. 595-607), illus.

Supplement to United States Department of Commerce, Bureau of Standards Technologic Paper 266. (See 829.)

(1063) SAMBON, L. W.

1907. TROPICAL CLOTHING. Jour. Trop. Med. and Hyg. [London] 10: 67-69.

Discusses certain hygienic and scientific considerations which led the author to the invention of Solaro fabrics. These fabrics are a combination of white with black, red, or orange threads so woven that the upper surface is white and the under surface colored, in imitation of the white clothing of the natives over their natural armor of pigment against the actinic rays. For military purposes other colors can be substituted for the white. For general and editorial references to the Solaro fabrics see Tropical Clothing, Jour. Trop. Med. and Hyg. [London] 10: 71 (1907), an editorial; Habile Habiliments for Hot Weather, Lancet-Clinic (n. s.) 59: 193 (1907); Clothing for the Tropics, Sci. Amer. 99: 87 (1908).

(1064) SCHMIDT, P.

1903. ÜBER SONNENSTICH UND ÜBER SCHUTZMITTEL GEGEN WÄRMESTRAHLUNG. [Sunstroke and protection against heat radiation.] Arch. Hyg. 47: [262]-290, illus.

In a portion of this article entitled "Kopfbedeckungen und tropenstoffe" [Head coverings and tropic materials], p. 280-286, an investigation of the heat transmitted by different materials for tropical wear is reported. Temperatures were measured thermoelectrically.

(1065) _____

1908. EXPERIMENTELLE BEITRÄGE ZUR FRAGE DER ENTSTEHUNG DES SONNENSTICHS. [Experimental contributions to the question of the origin of sunstroke.] Arch. Hyg. 65: [17]-31, illus.

The experimental part of this paper deals with a quantitative measurement of the amount of heat penetrating the skull due to radiation from the tropical sun. The author states that the choice of light or dark colored clothing should be dependent on the heat permeability, air permeability, and power of the material to absorb or reflect solar radiation.

(1066) _____

1909. ÜBER DIE HYGIENISCHE BEWERTUNG VERSCHIEDENFARBIGER KLEIDUNG BEI INTENSIVER SONNENSTRAHLUNG. [The hygienic value of clothing of different colors in intense sunlight.] Arch. Hyg. 69: 1-20, illus.

Considers the hygienic value of clothing from the standpoint of reflection and absorption of heat and permeability to light, heat, and air. The author concludes that in the case of thick materials white is always best; for thin materials white is best if the garment is close fitting; but if loose-fitting and permeable to air dark colors are better. Light colors are necessary in strong sunlight.

(1067) SCHUHMEISTER, J.

1877. VERSUCHE ÜBER DAS WÄRMELEITUNGSVERMÖGEN DER BAUMWOLLE, SCHAFWOLLE UND SEIDE. [Studies on the heat conductivity of cotton, wool and silk.] Sitzber. Akad. Wiss. Wien, Math. Naturw. Kl. Bd. 76, Abt. 2: 283-302.

The method of Stephan was applied to a comparison of the heat conductivities of three types of fibers. Complete experimental data are given.

(1068) SCHUMBURG.

1894-95. ZUR METHODIK DER UNTERKLEIDERUNTERSUCHUNG. [Methods of underwear investigation.] Deut. Militärärztl. Ztschr. 23: 360-373, 417-432, 471-487. 1894. 24: 267-273, 312-317, 384-386. 1895.

Detailed study of the properties of underwear influencing its ability to keep the body from cooling off. Heat conductivity, behavior toward moisture, air permeability, and elasticity were determined. Durability and strength in washing and mending were judged by statements from a number of persons. The effect of wear was studied on a shirt which had been worn for nine months.

(1069) SCHUSTER, A.

1888. UEBER DAS VERHALTEN DER TROCKENEN KLEIDUNGSSOFFE GEGEN-ÜBER DEM WÄRMEDURCHGANG. [The behavior of dry clothing material toward the passage of heat.] Arch. Hyg. 8: 1-77, illus.

Krieger's method for studying heat conductivity was improved and some commercial fabrics examined. The author concludes that there is no essential difference in the absolute conductivity of the different fibers and fabrics with the possible exception of silk fabric, and that the air enmeshed is an important factor in the amount of heat conducted.

- (1070) SEIBEL, H.
1882-83. UEBER DEN PROCESS DER ENTWÄRMUNG DES MENSCHLICHEN KÖRPERS UND DIE EINWIRKUNG DER LUFT AUF DENSELBE JE NACH DER BEKLEIDUNGSART. [The process of cooling of the human body and the effect of air on it according to the kind of clothing.] Jour. Gsndhtspflege 6: [37]-41, [49]-50, 63-66. 1882. 7: 2-5, 14-19, 33-34. 1883.
Discusses the loss of heat by evaporation, radiation, and conduction in its relation to the body temperature and heat exchange. In the discussion on air in relation to our clothing, Krieger's (see 1022) and Pettenkofer's (see 813 and 814) experiments are described.
- (1071) SELIGMAN, A.
1927. LA TEMPÉRATURE DE LA PEAU. [The temperature of the skin.] Médicale [Paris] 8: 752-756.
Report of Benedict's work. (See 985 and 986.)
- (1072) SKOWRÓNSKI, M. M. J.
1927. COULEUR ET PIGMENTS DES TISSUS DES VÊTEMENTS EN RAPPORT À LA PERTE EN CHALEUR DE L'ORGANISME. [Natural and dyed colors of clothing materials with reference to loss of heat from the body.] Archiwum Higjeny (Arch. Hyg.) [Vilno] 2: 25-54, illus. [In Polish, with French summary. Original not seen. Abstract in Bul. Hyg. [London] 3: 992. 1928.]
Reports a series of experiments to test the effect of the color of the material on the loss of heat from the human body.
- (1073) SLOSSON, E. E.
1924. HOT WEATHER CLOTHING. Sci. Mo. 19: 333-335.
Principles underlying heat movement and their application to the selection of hot-weather clothing are discussed.
- (1074) SMITH, G. M.
1869. ON SUNSTROKE. Med. Rec. [New York] 4: 221-224.
Contains a few paragraphs concerning the selection of clothing for the Tropics. A white or light-colored shirt over the usual red and blue shirts of the workmen is advocated.
- (1075) SPITTA, O.
1897. UEBER DAS WÄRMELEITUNGSVERMÖGEN EINIGER BETTSTOFFE. [The heat conductivity of some bedding materials.] Arch. Hyg. 32: [285]-293.
Following Rubner's method, materials in everyday use for bedding, such as a woolen blanket, covers of linen and cotton, and wool and cotton padding, were examined.
- (1076) STAFF, H.
1925. THE EFFECT OF HUMIDITY ON THE THERMAL CONDUCTIVITY OF WOOL AND COTTON. (Abstract.) Phys. Rev. (2) 25: 252.
Lees' disc was used for determining conductivity. Layers of material of any moisture content desired are placed between a central electrically heated disc and two heavy outer copper discs which are water cooled. Some experimental values are given.
- (1077) STEWART, G. N.
1891. ON THE CONDITIONS WHICH AFFECT THE LOSS OF HEAT BY RADIATION FROM THE ANIMAL BODY. Owens College, Manchester. Studies from the Physiological Laboratory 1: [101]-123.
"This paper includes (1) observations on the temperature of the skin of man when covered and exposed, and on the temperature of the surface of physiological and artificial protective coverings in man and one or two animals; (2) measurements of the amount of radiation from the normal radiating surfaces, and from skin which is normally covered; and (3) simultaneous measurements of temperature and radiation." The experimental method is described.
- (1078) TALBOT, F. B., DALRYMPLE, A. J., and HENDRY, M. F.
1925. SKIN TEMPERATURES IN NORMAL CHILDREN. Amer. Jour. Diseases Children 30: [483]-490, illus.
Skin temperatures on various parts of the body with and without clothing were measured by means of thermocouples. The experimental method is fully described.

- (1079) TEH, W. L.
1921. THE EFFECT OF THE SUN'S RAYS ON HATS IN SUMMER. *Natl. Med. Jour. China* 7: 128-130.
Hats of different materials and shapes were exposed to sunlight for a certain time and the temperature read from thermometers placed inside each hat. The resulting data are tabulated and conclusions drawn.
- (1080) TROUPEAU.
1881. ÉTUDE DES COIFFURES AU POINT DE VUE DE LA CHALEUR SOLAIRE. [A study of headdress from the point of view of solar heat.] *Jour. Méd. et Pharm. Algérie* 6: [153]-157, illus.
Experimental study of many types of men's headwear both civil and military. The amount of heat which penetrates the different headdresses is dependent upon the form, nature, and color. The experimental method is described in detail and illustrated.
- (1081) TUAL, C. F. M.
1838. DES AVANTAGES QUI RÉSULTENT DE L'APPLICATION CONSTANTE DE VÊTEMENTS DE LAINE. [Advantages which result from the constant application of wool clothing.] 34 p. Paris. (Thèse no. 330.)
Study of the properties of clothing with regard to heat regulation and absorption of perspiration. The advantages and a few disadvantages of wool are discussed with reference to season, age, sex, profession, and habit.
- (1082) VARIOT, G., AND LAVIALLE, P.
1912. ÉTUDE DU RAYONNEMENT CALORIFIQUE CHEZ LES NOURRISSONS DANS SES RAPPORTS AVEC L'ALIMENTATION ET L'ACCROISSEMENT, SPÉCIALEMENT CHEZ LES ATROPHIQUES ET LES DÉBILES, CALORIMÉTRIE DIRECTE. [Study by direct calorimetry on heat radiation among infants with respect to nutrition and growth, especially among the atropic and weak.] *Bul. et Mém. Soc. Méd. Hôpitaux Paris* (3) 33: 410-428, illus.
By direct calorimetry, very considerable differences in the heat radiation of normal children were found when seemingly very trivial changes were made in the clothing. The radiation was increased by replacing a woolen diaper by a cotton cloth or by exposing the arms or the legs. It was decreased by covering the child with a single woolen cover.
- (1083) VERNON, H. M., and OTHERS.
1926. METHODS OF INVESTIGATING VENTILATION AND ITS EFFECTS. 71 p., illus. London, His Majesty's Stationery Office. ([*Gt. Brit.*] *Med. Research Council, Spec. Rpt. Ser. no. 100.*)
Part 4 is a report of an experiment conducted by the author on "the influence of temperature, air velocity, and clothing on the rate of cooling the human body," from which he concludes that in order to reduce the temperature of an overheated man it is first necessary to reduce the temperature of the room, then the amount of clothing. Increase of air velocity has little effect.
- (1084) WILLIAMS, W. M.
1885. THE PHILOSOPHY OF CLOTHING. I. OUR NATURAL CLOTHING. *Knowledge* 7: 100-101.
General discussion introducing a series of articles on clothing and stressing the value of clothing in maintaining the body temperature.
- (1085) ———.
1885. THE PHILOSOPHY OF CLOTHING. II.—THE SKIN. *Knowledge* 7: 147-148, illus.
Discusses the structure and functions of the skin, emphasizing that it is the natural clothing of the body and that the artificial clothing should cooperate as a protection against excessive heat as well as against the too rapid cooling of the body.

(1086) WILLIAMS, W. M.—Continued.

1885. THE PHILOSOPHY OF CLOTHING. III.—THE REGULATION OF THE TEMPERATURE OF THE BODY. Knowledge 7: 186-187.

Discusses the ability of the skin to assist in keeping down the body temperature. Clothing mentioned only incidentally.

(1087) ———.

1885. THE PHILOSOPHY OF CLOTHING. IV.—THE COOLING ACTION OF THE SKIN. Knowledge 7: 233-235.

General discussion of the expiration of gases by the skin. Clothing is not mentioned.

(1088) ———.

1885. THE PHILOSOPHY OF CLOTHING. V.—THE COOLING ACTION OF THE SKIN. Knowledge 7: 274-275.

Explains the author's theory that the carbonic acid evolved from the skin may be a product of internal combination of solid or liquid oxygen with solid or liquid carbon. Clothing should allow the free passage of gas or vapor but should resist the passage of heat and shut in the body radiations.

(1089) ———.

1885. THE PHILOSOPHY OF CLOTHING. VI.—THE PROTECTING POWER OF DIFFERENT MATERIALS. Knowledge 7: 321-322.

Describes the studies of Benjamin Thompson (Count Rumford), on the heat conductivity of various textile materials. Data from these experiments are quoted. (See 1057.)

(1090) ———.

1885. THE PHILOSOPHY OF CLOTHING. VII.—RUMFORD'S EXPERIMENTS ON CLOTHING MATERIALS. Knowledge 7: 361-362.

Describes studies of Count Rumford on the heat protection of fibers in different conditions of density. These experiments were made in an effort to determine whether the nonconduction of the materials used in previous work was due to the fibers themselves or to the air held between them. Data are quoted. (See 1058.)

(1091) ———.

1885. THE PHILOSOPHY OF CLOTHING. VIII.—THE TRANSMISSION OF HEAT THROUGH CLOTHING. Knowledge 7: 407-408.

Discusses the work of Count Rumford from which he concluded that air in a quiescent state can not conduct heat. The relation of this to the protective power of clothing is pointed out. (See 1059.)

(1092) ———.

1885. THE PHILOSOPHY OF CLOTHING. IX.—GASEOUS CLOTHING MATERIAL. Knowledge 7: 450-452.

A further discussion of Count Rumford's findings concerning the nonconductance of heat by still air and the importance of this in conserving the body heat of fur and feather-bearing animals. The adhesion of air to textile materials is also considered at length from the same standpoint. (See 1058.)

(1093) ———.

1885. THE PHILOSOPHY OF CLOTHING. X.—GASEOUS CLOTHING MATERIAL. Knowledge 7: 496-498.

A continuation of 1092.

(1094) WOLF, H. F.

1911. CLOTHING AND REGULATION OF THE BODY TEMPERATURE. N. Y. Med. Jour. 94: 20-22.

Advocates heavy top garments for changeable climates and stresses the danger of wearing garments permeated with moisture. No experimental data are reported.

(1095) WOLPERT, H.

1899. UEBER DIE AUSNUTZUNG DER KÖRPERLICHEN ARBEITSKRAFT IN HOCH-WARMER LUFT. [The expenditure of bodily strength in very warm air.] Arch. Hyg. 36: [294]-322, illus.

Investigation carried out on clothed and nude subjects working in both still and moving dry air at temperatures between 32° and 33° C. Laying aside of clothing in very warm air is advocated. Many tables of results are given.

- (1096) YAGLOGLOU, C. P., and MILLER, W. E.
1925. EFFECTIVE TEMPERATURE WITH CLOTHING. *Jour. Amer. Soc. Heating and Ventilating Engin.* 31: 59-70, illus.
Combinations of temperature, humidity, and air movement which gave equal comfort conditions were determined for normally clothed individuals.
- (1097) YAGLOU, C. P.
1926. THE THERMAL INDEX OF ATMOSPHERIC CONDITIONS AND ITS APPLICATION TO SEDENTARY AND TO INDUSTRIAL LIFE. *Jour. Indus. Hyg.* 8: [5]-19, illus.
Experiments previously reported "supplemented by a section on the practical application of effective temperature to sedentary and to industrial life" are discussed. Two scales of effective temperature, basic and normal, dependent upon whether the subject is stripped to the waist or lightly clothed, were developed.
- (1098) ——— and DRINKER, P.
1928. THE SUMMER COMFORT ZONE: CLIMATE AND CLOTHING. *Jour. Indus. Hyg.* 10: 350-363, illus.
Reports a determination of the summer comfort zone by experiments on a large group of men and women wearing customary warm-weather clothing and engaged in sedentary pursuits. A statistical study of the relation of climate and season to the type of underclothing worn is included.

LIGHT TRANSMISSION

- (1099) ANONYMOUS.
1927. CELANESE. . . . *Textile World* 72: 566.
Tests carried out with sports costumes of Vio-Ray, a material made of two-thirds celanese and one-third wool show that celanese is permeable to ultra-violet rays to a very high degree. White patterns appeared on the wearers where the rays were unable to penetrate the wool.
- (1100) ———.
1927. ITEMS. *Science-Sup.* (n. s.) 66 (1719): xii.
Report of tests by the United States Bureau of Standards on the permeability of rayon and cotton to short wave lengths of light. Dyes or yellowness due to age reduce the transmissivity. It is concluded that the composition of the fabric is of less importance than the weave.
- (1101) ALEXANDER, F. W.
1926. TEXTILE FABRICS: ULTRA-VIOLET TRANSMISSION. (Abstract) *Jour. Textile Inst.* 17: A239; Simple portable photometer for gauging intensity of ultra-violet rays. (Abstract) *Analyst* 51: 54.
The order in which the fabrics examined transmit the near ultra-violet rays is reported. The experimental method is described.
- (1102) BARRATT, T.
1924. MEASUREMENT OF THE TRANSPARENCY OF A FABRIC. *Faraday Soc. Trans.* 20 (pt. 2): 236-239, illus.
Procedures are given for measuring the total transparency and the thread transparency of a fabric.
- (1103) BOUBNOFF, S.
1890. UEBER DAS PERMEABILITÄTSVERHÄLTNISS DER KLEIDUNGSSTOFFE ZUM CHEMISCH WIRKENDEN SONNENSTRAHL. [The permeability of clothing materials to chemically active solar radiation.] *Arch. Hyg.* 10: 335-366.
Study of the permeability to solar radiation of washed and unwashed fabrics of different composition, color, and thickness. The method consisted in determining photometrically the amount of blackening of a photographic plate placed under the test material during the exposure. The literature, including several Russian references, on the chemical action of light on the skin is discussed.

(1104) CANDLISH, C. G.

1927. RECENT DEVELOPMENTS IN THE DYEING OF CELANESE MIXTURES. Jour. Soc. Dyers and Colourists 43: [37]-42.

Some experiments on the comparative permeability to light of cotton and celanese are described briefly. Celanese is advocated for underwear because of its permeability to light and nonconductivity of heat.

(1105) COBLENTZ, W. W., STAIR, R., and SCHOFFSTALL, C. W.

1928. SOME MEASUREMENTS OF THE TRANSMISSION OF ULTRA-VIOLET RADIATION THROUGH VARIOUS FABRICS. U. S. Dept. Com., Bur. Standards Jour. Research 1: 105-124, illus. (Reprinted as U. S. Dept. Com., Bur. Standards, Research Paper 6.)

Describes determinations of the ultra-violet and visible radiation transmitted through cotton, silk, rayon, linen, and wool fibers and fabrics. Comparison of close and open weaves of the various materials having the same weight showed no difference in the amount of ultra-violet transmitted through bleached samples of cotton, linen, or rayon. Fresh, white, natural silk was found to be almost as transparent as bleached cotton, while wool was only about half as transparent. The weave, however, is an important factor in determining the amount transmitted. The transmissivity of a fabric is decreased by dyeing or yellowing by age.

(1106) DOZIER, C. C., and MORGAN, H.

1928. PENETRATION OF ULTRA-VIOLET RAYS THROUGH CLOTHING MATERIALS. Amer. Jour. Physiol. 84: 603-609, illus.

Filters of meadow lane (cotton), baby flannel (wool), crepe de chine (silk), pongee (wild silk), and viscose rayon were interposed between cottonseed oil and a mercury-vapor quartz lamp. The oil was fed to rachitic rats and McCollum's "line test" for rickets applied at the end of eight days. The cotton, pongee, and wool filtered out the antirachitically potent ultra-violet radiations while the rayon and cotton fabrics transmitted them. However, the fact that the latter had the largest interspaces between the yarns and the smallest percentage of ash indicates that there are other factors which influence this property.

(1107) HESS, A. F., and WEINSTOCK, M.

1923. A STUDY OF LIGHT WAVES IN THEIR RELATION TO RICKETS. Jour. Amer. Med. Assoc. 80: 687-690, illus.

Includes a series of tests on the transmissibility to light of some clothing materials commonly worn by infants. Thin white cotton dress material, cotton stockings, wool stockings, and also a black material were examined. The authors concluded that the screening effect is dependent upon the thickness and nature of the material and the duration of exposure.

(1108) HESS, K., HAMILTON, J. O., and JUSTIN, M.

1927. PROTECTION AFFORDED THE SKIN AGAINST SUNBURN BY TEXTILE FIBERS. Jour. Agr. Research 35: 251-259, illus.; reported in Kans. Agr. Expt. Sta. Director's Rpt. 1924-1926: 131-132.

Study, using human subjects, of the relative ability of the textile fibers, wool, silk, linen, and cotton, to screen out the ultra-violet light from direct sunlight and from artificial light sources. It is concluded that the protection is dependent chiefly upon the percentage of interspace due to weave, although the nature of the fiber is also a factor.

(1109) HIRST, H. R., KING, P. E., and LAMBERT, P. N.

1928. TRANSMISSION OF ULTRA-VIOLET RADIATION BY VARIOUS FABRICS. Jour. Soc. Dyers and Colourists 44: 109-113, illus.

Reports a comparative study of over a hundred fabrics of all sorts of fibers, weaves, and textures, and variously processed. The results show that weave and texture are of primary importance. Dyeing decreases the transmissivity, while bleaching improves it. For equal thicknesses of material, wool has on the whole a higher transmissive power than the other fibers examined.

- (1110) KING, P. E.
1927. THE USES OF ARTIFICIAL SILK IN THE TEXTILE INDUSTRIES. Jour. Soc. Dyers and Colourists 43: 219-225, illus.
Contains a general statement that in tests on ultra-violet transmission, the various rayons show no great individual difference, and that each allows the ultra-violet light to pass readily.
- (1111) MORGAN, H.
1928. PENETRATION OF ULTRA-VIOLET RAYS THROUGH CLOTHING MATERIALS. PART II. Amer. Jour. Physiol. 86: 32-35, illus.
The influence of weave and weight of fabrics on their ultra-violet-light transmissibility was studied by determining the biological effect of cottonseed oil irradiated through a fabric filter on rachitic rats. The author suggests that porosity of fiber is a significant factor in ultra-violet-light transmissibility as well as weight and the mean interspace between the threads.
- (1112) SLOSSON, E. E.
1926. HEALTH FROM ULTRA-VIOLET RAYS. Sci. Mo. 22: 81-83.
A general discussion of the effect of light on health, containing the statement that loosely woven white cotton or rayon affords the least interference to the passage of air and of ultra-violet rays.
- (1113) TROTMAN, S. R.
1929. THE TRANSPARENCY OF TEXTILE FABRICS IN ULTRA-VIOLET LIGHT. Textile Recorder 47 (550): 63.
Tests on coarse and high-grade wool web, chlorinated and overchlorinated wool, viscose, cuprammonium, chardonnnet, and celanese rayons, cotton, and silk indicate that no ordinary textile fabric, even in a thin layer, transmits a sufficient quantity of ultra-violet light to be of therapeutic value. Loosely knitted fabrics allow this light to pass between the yarns.
- (1114) UNITED STATES DEPARTMENT OF COMMERCE. BUREAU OF STANDARDS.
1927. ULTRA-VIOLET TRANSMISSION OF CELANESE. U. S. Dept. Com., Bur. Standards Tech. News Bul. 124: 9.
Examination of celanese fabrics showed that the closeness of weave is evidently the most important factor in determining the amount of ultra-violet transmitted.
- (1115) ———.
1927. ULTRA-VIOLET TRANSMISSION OF FABRICS. U. S. Dept. Com., Bur. Standards Tech. News Bul. 126: 4-5; Amer. Dyestuff Rptr. 16: 686.
Transmission coefficients for viscose and cellulose acetate rayon, cotton, wool, and silk fabrics indicate that the effect of composition has been overestimated. For beneficial therapeutic results, an open-weave fabric is advocated.
- (1116) WOODRUFF, C. E.
1905. THE EFFECTS OF TROPICAL LIGHT ON WHITE MEN. 358 p. New York and London, Rebman Co.
"Tropical clothing" is considered on pages 323 to 327. It is recommended that day clothing and headwear should be opaque. For day wear in the Tropics, black underclothing and white outer garments are recommended; for evening, black or dark blue. The head is particularly sensitive to ultra-violet light, and should be protected by a hat with a wide brim through which no rays can penetrate.
- (1117) YOUNG, J. S.
1916. A FEW INTERESTING FINDINGS AS REGARDS THE CLOTHING THE PATIENT WEARS WHEN ROENTGEN-RAYED. Jour. Mo. State Med. Assoc. 13: 502-504.
Some tests are reported on the permeability of various fabrics to Roentgen rays. Silk is most impervious, the degree being dependent upon its thickness and quality, especially with reference to metallic weighting.

MOISTURE ABSORPTION

(1118) ANONYMOUS.

1924. THE ABSORPTION OF MOISTURE BY TEXTILE FIBERS. *Textile Recorder* 42 (499): 69, 71.

A review of the literature.

(1119) BARDET.

1893. VALEUR D'ABSORPTION DE LA FLANELLE AU POINT DE VUE DE L'HYGIÈNE. [The power of absorption of flannel from the hygienic point of view.] *Bul. et Mém. Soc. Méd. et Chirurg. Prat. Paris* 1893: 279-281.

The absorption powers of ordinary flannel and of a fabric called "flanelle a jour" are compared.

(1120) BENEDICT, F. G., and Root, H. F.

1926. INSENSIBLE PERSPIRATION: ITS RELATION TO HUMAN PHYSIOLOGY AND PATHOLOGY. *Arch. Int. Med.* 38: [1]-35, illus.

Reports results of an experiment testing the effect of protective clothing on insensible perspiration.

(1121) BOUBNOFF, S.

1883. ZUR FRAGE VOM VERHALTEN GEFÄRBTER ZEUGE ZUM WASSER UND ZUR LUFT. [Concerning the behavior of dyed materials to water and to air.] *Arch. Hyg.* 1: [418]-442.

Experimental study of the effect of dyeing on the behavior of cotton, wool, and linen fabrics to water and to air. No influence of color is found on either the amount or speed of absorption of hygroscopic water, but considerable influence is noted on the permeability of the fabrics to air.

(1122) BURR, A. H.

1928. A SIMPLE CONSTANT-DROP APPARATUS. *Jour. Soc. Dyers and Colourists* 44: 18-19, illus.

Directions for constructing a device to test the resistance of waterproofed cloth.

(1123) CRAMER, E.

1890. UEBER DIE BEZIEHUNG DER KLEIDUNG ZUR HAUTTHÄTIGKEIT. [The relation of clothing to the functions of the skin.] *Arch. Hyg.* 10: [231]-282.

Study of the absorption of perspiration by stockings of different materials, particularly of cotton and wool.

(1124) FISHER, E. A., and BARKER, G.

1927. THE INFLUENCE OF VARIOUS FACTORS ON THE RATE OF DRYING OF WOOLLEN AND WORSTED FABRICS. *Jour. Textile Inst.* 18: T195-T206, illus.

The influences of temperature, size of cloth, and style of fabric on the rate of drying of wool fabrics were studied.

(1125) GAWALOWSKI, A.

1893. APPARAT UND METHODE ZUR PRÜFUNG WASSERDICHT IMPRÄGNIRTER GEWEBE AUF IHRE LEISTUNGSFÄHIGKEIT. [Apparatus and method for testing waterproof impregnated fabrics for their conductivity.] *Leipziger Monatschr. Textil-Indus.* 8: 221-222, illus.

Description of the apparatus.

(1126) GREAT BRITAIN. WAR OFFICE.

1908. FOURTH REPORT (ON CLOTHING AND EQUIPMENT) OF COMMITTEE ON PHYSIOLOGICAL EFFECTS OF FOOD, TRAINING, AND CLOTHING ON THE SOLDIER. 15 p. [London, His Majesty's Stationery Office.]

Comparison of the evaporation of moisture from the body, the increase in weight of clothing, and the comfort of soldiers marching in two different types of equipment.

(1127) GROVE-PALMER, F.

1927. SILK OR WOOL FOR UNDERWEAR. *Hosiery Trade Jour.* 34 (406): 80. [Original not seen. Abstract in *Jour. Textile Inst.* 19: A40. 1928.]

Discusses the relative advantages of both fibers with regard to moisture absorption. Wool is more hygroscopic, but silk can hold more water without feeling wet and is therefore useful for wearers who perspire greatly.

- (1128) HILLER, A.
1888. UNTERSUCHUNGEN ÜBER DIE BRAUCHBARKETT PORÖS-WASSERDICHT GEMACHTER KLEIDERSTOFFE FÜR DIE MILITÄRBEKLEIDUNG. [Investigations on the practical value of porous clothing made waterproof for military clothing.] Deut. Militärärztl. Ztschr. 17: 1-29.
Exhaustive experimental study of the permeability to water and to air of wet and dry waterproof military clothing. Hygienic clothing should be permeable to air and impervious to liquid. The ideal is that the outer garments of man should shed water like the feathers of a duck.
- (1129) KYD, H.
1852. REMARKS ON THE EFFECTS OF CLOTHING ON CUTANEOUS EXHALATION. Lancet [London] 1852 (v. 2): 263-264.
Contends that the habitual use of impervious coverings is injurious; for rainy weather, however, such garments, if properly made, protect the wearer from access of rain, and yet permit ventilation of the body.
- (1130) LEHMANN, K. B.
1906. ÜBER DIE URSACHEN DES VERSCHIEDENEN KAPILLAREN WASSERAUFSAUGEVERMÖGENS DICHTER WEISSER LEINEN UND BAUMWOLLSTOFFE. [The causes of the different capacity for capillary water absorption of closely woven white linen and cotton materials.] Arch. Hyg. 59: [266]-282.
Such factors as temperature, humidity, sizing, bleaching, and structure of the fabric were studied. Strips of material of suitable length were suspended so that the lower ends dipped into the solution. The rate of ascent of the liquid was observed.
- (1131) ——— and SIEGLER, J.
1908. ÜBER DIE FÄHIGKEIT DER SCHWEISSAUFNAHME VON WOLLE UND BAUMWOLLE. [The ability of wool and cotton to absorb perspiration.] Arch. Hyg. 66: [297]-304.
Comparative study of the absorption of perspiration by cotton and wool stockings. The experiments confirm Cramer's results (see 1123) but show his interpretation to be incorrect.
- (1132) LEROY, G. A.
1915. SUR LA MESURE DE L'IMPERMÉABILISATION DES DRAPS ET TISSUS MILITAIRES. [Measuring the impermeability of cloth and military fabric.] Compt. Rend. Acad. Sci. [Paris] 160: 803-805, illus.
New apparatus is described for measuring the permeability of fabrics to water under comparable conditions of pressure, surface, time, and temperature.
- (1133) LINROTH, K.
1881. EINIGE VERSUCHE ÜBER DAS VERHALTEN DES WASSERS IN UNSEREN KLEIDERN. [Some experiments on the water content in our clothing.] Ztschr. Biol. 17: [184]-213. (Review in Rev. Hyg. et Police Sanit. 4: 78-82. 1882.)
Measurements on the amount of water absorbed by linen, cotton, flannel, and silk materials in atmospheres of different temperatures, humidities, and air motions are reported. Differences were noted in the water content of different layers of clothing depending upon their position with reference to the body and the outside atmosphere.
- (1134) MCCLURE, W. B., and SAUER, L. W.
1918. OBSERVATIONS REGARDING THE LOSS OF WATER VAPOR THROUGH THE SKIN IN INFANTS. Arch. Int. Med. 21: [428]-436.
Reports data regarding the amount of insensible perspiration eliminated by normal and atrophic infants. Results are included showing the effect of ventilation and cotton clothing on this, the amount of moisture in such clothing, and the amount which passed through the fabric from a vessel of water. The authors conclude that cotton garments do not seem to offer an obstacle to the loss of water vapor from the skin.

- (1135) MENSE, C.
1890. UEBER DAS VERHALTEN VON KLEIDUNGSTOFFEN GEGENÜBER TROFFBAR FLÜSSIGEN WASSER. [The behavior of clothing materials toward liquid water.] München. (Inaug. Diss.) [Original not seen.]
- (1136) MÜLLER, B.
1884. UEBER DIE BEZIEHUNG DES WASSERS ZUR MILITÄRKLIEDUNG. [Water in relation to military clothing.] Arch. Hyg. 2: 1-34.
Exhaustive study, from the hygienic standpoint, of hygroscopic water and water in the liquid form in military clothing. Included clothing as a whole as well as individual garments, boots, and cloths used in place of stockings. The fabrics studied were of wool and of cotton.
- (1137) MULLIN, C. E.
1925. CONDITION OR REGAIN IN WOOL. Textile Colorist 47: 366-369, 497-502, illus.
Review of the literature relating to moisture in textile materials, particularly wool. Bibliography of 124 references.
- (1138) POMMAY.
1891. DE L'IMPERMÉABILISATION DES VÊTEMENTS. [The waterproofing of garments.] Rev. Hyg. et Police Sanit. 13: 1128-1144.
Review of the literature dealing with the effect of perspiration on the cooling of the body and the effect of clothing on this process.
- (1139) REICHENBACH.
1891. BEITRÄGE ZUR LEHRE DER WASSERAUFNAHME DURCH DIE KLEIDUNG. [Contributions to the knowledge of the absorption of water by clothing.] Arch. Hyg. 13: [113]-121.
Study of the relative absorption by different clothing materials of the moisture given off by the body. The amount absorbed is dependent upon fiber, air circulation, and perviousness of the outer layers of clothing.
- (1140) RUMFORD, COUNT OF. [Benjamin Thompson.]
1787. EXPERIMENTS MADE TO DETERMINE THE POSITIVE AND RELATIVE QUANTITIES OF MOISTURE ABSORBED FROM THE ATMOSPHERE BY VARIOUS SUBSTANCES, UNDER SIMILAR CIRCUMSTANCES. Roy. Soc. [London] Phil. Trans. 77: 240-245. (Reprinted under the title "An account of some experiments made to determine the quantities of moisture absorbed from the atmosphere by various substances," in the Complete Works of Count Rumford 1: [232]-236. Boston, Amer. Acad. Arts and Sci. 1870.)
Describes experiments comparing the weight of different fibers after being dried, when exposed to ordinary room temperature, and when left in a damp cellar. Discusses the results in relation to the use of these fibers in clothing and advocates wearing wool next to the skin.
- (1141) TECHOUÉYRES, D.
1924. L'UTILITÉ DES SOUS-VÊTEMENTS EN FLANELLE. [The utility of flannel underwear.] Presse Méd. [Paris] 32: 2078-2079.
Recommends flannel rather than knit fabrics for underwear because it is more porous and therefore absorbs the moisture from the body more readily.
- (1142) URQUHART, A. R., and WILLIAMS, A. M.
1926. THE MOISTURE RELATIONS OF COTTON. Jour. Textile Inst. 17: T38-T45, illus.
Experimental data are given for the hygroscopic properties of variously processed cotton. Removal of noncellulosic impurities decreases the hygroscopicity which is further reduced by dyeing.
- (1143) WILLIAMS, W. M.
1885. THE PHILOSOPHY OF CLOTHING. XI.—THE REMOVAL OF PERSPIRATION BY CLOTHING. Knowledge 7: 538-540.
A discussion of Count Rumford's experiments on the moisture absorption of fabrics (see 1140).

- (1144) WOLPERT, H.
1903. ÜBER DEN EINFLUSS DER BESONNUNG AUF DEN WASSERDAMPFGEHALT DER KLEIDERLUFT. [The influence of exposure to the sun on the amount of water vapor present in the layer of air between the skin and the first layer of clothing.] Arch. Hyg. 48: [107]-113, illus.
Experimental study of the effect of exposure to the sun on the humidity of the air between the skin and the clothing. It was found that the absolute humidity varied in either direction after exposure to the sun, but the relative humidity was always less.
- (1145) WURSTER, C.
1888. UEBER EIN HYGROMETER IN KLEINEM FORMATE ZUR UNTERSUCHUNG DES KÜNSTLICHEN KLIMA'S DES BEKLEIDETEN KÖRPERS. [A small-sized hygrometer for investigating the artificial climate of the clothed body.] Ztschr. Hyg. 3: [466]-468, illus.
Describes a small, flat Lambrecht hair hygrometer used for measuring the moisture content of the layer of air between the skin and the clothing.

CLOTHING AS A CARRIER OF DISEASE

- (1146) ANONYMOUS.
1865. ASSASSINATION BY POISONED CLOTHING. Lancet [London] 1865 (v. 1): 661.
Report of the conviction of a man for having in his possession a quantity of clothing previously worn by persons who died of yellow fever.
- (1147) ———.
1884. SMALL-POX AND INFECTED RAGS. Sanit. Rec. (n. s.) 5: 550-551.
Reports several cases of smallpox due to infection from rags in a paper mill.
- (1148) BERGEY, D. H.
1918. THE PRINCIPLES OF HYGIENE; A PRACTICAL MANUAL FOR STUDENTS, PHYSICIANS, AND HEALTH OFFICERS. Ed. 6. 543 p., illus. Philadelphia and London, W. B. Saunders Co.
Cites the work of Viola and Morella, who made studies of the microorganisms contained in different kinds of clothing. The numbers of bacteria found depended upon the length of time the garment was worn, the part of the body with which it came into contact, the occupation of the wearer, and the particular fibers from which the garments were made. They concluded that "garments are a potent means for diffusion of infectious agents and that without special treatment pathogenic germs can retain their virulence in human raiment for a considerable but not indefinite period."
- (1149) BEYER, T.
1896. UEBER WÄSCHEDESINFECTION MIT DREIPROCENTIGEN SCHMIERSEIFEN-LÖSUNGEN UND MIT KALKWASSER. [The disinfection of laundry with three per cent soft soap and limewater.] Ztschr. Hyg. u. Infektionskrank. 22: [228]-262, illus.
Reports numerous experimental studies on the effectiveness of laundering and other procedures as disinfectants. The author concludes that body and bed linen of persons suffering with infectious diseases, such as cholera, diphtheria, and chicken pox, are not sufficiently disinfected by ordinary washing methods but that a solution containing 3 per cent soap and limewater is a very good disinfectant for use on cotton and linen.
- (1150) CAMERON, C. A.
1911. THE DISINFECTION OF NEW AND SECOND HAND CLOTHES. Jour. Roy. Inst. Pub. Health 19: 363-364.
Reports cases of smallpox and scarlet fever transmitted by secondhand clothing, and states that new clothing has also been found to carry infection.

(1151) DAVIES, M.

1916. L'ANTISEPTISATION DES VÊTEMENTS MILITAIRES COMME MOYEN PROPHYLACTIQUE DE L'INFECTION DES PLAIES DE GUERRE. [The antisepticizing of military garments as a means of preventing infection of the wounds of war.] Rev. Hyg. et Police Sanit. 38: 903-912.

Examination of clothing worn by wounded soldiers showed the presence of bacteria which often gain access to the wounds and prove fatal. Data are given on several tests on clothing rendered antiseptic from which it is concluded that the expense of such treatment is justified.

(1152) DENNY, F. P., and NYHEN, J. A.

1904. THE TRANSMISSION OF INFECTION BY MEANS OF FOOTWEAR. Jour. Mass. Assoc. Bd. Health 14: 109-122.

Reports an experimental study of the readiness, extent, and duration of the adherence of infectious material to the shoes. The results showed that contagious diseases are easily transmitted by footwear.

(1153) ELLEDGE, H. G., and MCBRIDE, W. E.

1918. ON THE BACTERICIDAL EFFICIENCY OF SOAP SOLUTIONS IN POWER LAUNDRY. Amer. Jour. Pub. Health 8: [494]-498.

Report on experiments conducted at the Mellon Institute of Industrial Research from which it is concluded that a clothes-washing process will not render fabrics absolutely sterile but combined with drying at high temperatures and ironing, the washing with soap produces a bactericidal efficiency comparable to pasteurization.

(1154) FULTON, D., and STANFORD, K. J.

1918. THE STERILIZATION OF WOOLEN BLANKETS AND UNIFORMS. Jour. Amer. Med. Assoc. 71: 823-824.

General account of the sterilizers used in hospitals and summary of an effective procedure for sterilizing goods without deterioration or shrinkage.

(1155) HAHN, M., and STRAUSS, W.

1927. UEBER DIE VERWENDUNG VON BÜGELMASCHINEN ZU DESINFEKTION. [Concerning the use of ironing machines for disinfection.] Deut. Med. Wchnschr. 53: 1738-1739. (Reviewed in Off. Bul. Laundryowners Nat. Assoc. U. S. and Canada and Amer. Inst. Laundering 11 (2): 24. 1928.)

Reports experiments which showed that ironing frees clothing and blankets from certain bacteria. The author believes this a promising method for the disinfection of hotel textiles.

(1156) HEIM, F., FERNBACH, E., and RULLIER, G.

1919. L'ANTISEPTISATION DES VÊTEMENTS DU COMBATTANT ÉTUDE EXPÉRIMENTALE. [The sterilization of the clothing of the soldier, experimental study.] Ann. Inst. Pasteur 33: [537]-556, illus.

Study of the possibility of making military clothing antiseptic so as to prevent gangrene and tetanus. Experiments with animals are described in which diseases were produced from cloth unimpregnated with germ-resistant chemicals. The author concludes that certain chemicals prevent specific infections.

(1157) HOBEIN.

1890. MIKROORGANISMEN IN UNTERKLEIDERN. [Microorganisms in underclothing.] Ztschr. Hyg. 9: [218]-234.

Reports a determination of the number of microorganisms present on underclothing made of cotton, silk, wool, and linen fabrics. The clothing was worn for varying lengths of time and the cultures taken from portions of the garment rubbing different parts of the body.

(1158) JACKSON, L. E.

1922. THE BACTERIAL ACTION OF DRY CLEANING. Amer. Jour. Pub. Health 12: 507-509.

Reports experiments which show that the dry cleaning procedure using a benzol-soap or a gasoline-soap wash followed

- (1158) JACKSON, L. E.—Continued.
by a rinse in pure benzol or gasoline has a very high bactericidal efficiency as measured by the standards used in public health work for laundering and the treatment of drinking water, milk, and food products.
- (1159) JAKSCH, R.
1912. SCHUTZKLEIDUNG GEGEN ANSTECKENDE KRANKHEITEN. [Clothing to prevent contagious diseases.] *Amtsarzt.* 4: 436-440.
Describes clothing designed to protect the physician as well as the patient from contagious disease. Gives method for the disinfection of a physician's garments after he has attended a patient.
- (1160) KNACK, A. V.
1915. INSEKTSICHERE SCHUTZKLEIDUNG. [Clothing which prevents attack by insects.] *Deut. Med. Wchnschr.* 41: 922-924, illus.
Describes experimental work which was undertaken to determine the possibility of making insect-proof garments and thus to avoid certain infections carried by lice. Poisonous powders between the outer garment and its lining would destroy the insects should they gain entrance this far.
- (1161) KRATSCHMER and SCHÖFER.
1893. UEBER DIE EINWIRKUNG DER DAMPFDESINFEKTION AUF DIE FESTIGKEIT VON THIERWOLLE UND DARAUS GEFERTIGTEN KLEIDUNGSTOFFEN. [A study of the action of steam disinfection on the strength of the raw wool and the finished clothing fabrics made therefrom.] *Militärarzt [Wien]* 27: [9]-13, 17-20, 28-31. (Sup. to *Wiener Med. Wchnschr.*)
Reports experiments determining the effect of steam disinfection which were carried out on different kinds of fabrics used for military clothing. The length of the treatment and the age of the material were considered.
- (1162) KRÜGELSTEIN.
1839. VON DEM TRÜDELHANDEL UND DESSEN GROSSEN NACHTHEILEN FÜR DIE GESUNDHEIT. [Secondhand clothing and its great menace to health.] (In Henke, A., *Ztschr. Staatsarzneikunde* 38: [241]-268.)
Discusses secondhand clothes, bedding, and body and bed linens used during illness as carriers of contagious diseases. Many cases of epidemics spread by infected clothing are cited with numerous references to the literature. Suggestions are given for secondhand dealers. The article is of historical interest.
- (1163) KUNZ, C.
1900. ÜBER DIE VERBREITUNG VON INFEKTIONSTOFFEN DURCH DIE FUSSBEKLEIDUNG. [Shoes as a means of spreading infection.] 37 p. Freiburg. (Inaug. Diss.)
Investigation of the dust and dirt on shoes. From microscopical studies and the cultures obtained, it is concluded that shoes may contain infectious material and thus be a menace to health.
- (1164) LÉGER, J.
1921. L'INSALUBRITÉ DES POCHEs. CONTRIBUTION A L'ÉTUDE DE L'HYGIÈNE DU VÊTEMENT. [The unhealthfulness of pockets. Contribution to the study of the hygiene of clothing.] 40 p. Paris. (Thèse.)
Report of series of experiments on the bacteriological investigations of pockets and pocket handkerchiefs. The author suggests easily detachable pockets so that they can be removed and frequently cleaned.
- (1165) NEUMANN, O.
1913. DIE DAMPFWÄSCHEREIEN UND IHRE HYGIENISCHE BEDEUTUNG. [Steam laundries and their hygienic significance.] *Gsndhts. Ingen.* 36: 39-40.
Description and critical discussion of various types of washing machines with particular regard to their hygienic value.

- (1166) NUSSBAUM, H. C.

1913. DIE DAMPFWÄSCHEREIEN UND IHRE HYGIENISCHE BEDEUTUNG. [Steam laundries and their hygienic significance.] Gsundhts Igen. 36: 39-40.

Deals with the need of public steam laundries for hygienic and economical reasons, and shows how they are practical.

- (1167) PFUHL, A.

1896. BEITRAG ZUR BEDEUTUNG DER KLEIDUNG ALS INFECTIONSVERMITTLER. [Significance of clothing as a conveyance of disease.] Allg. Med. Cent. Ztg. 65: [37]-39, [49]-51.

Discusses mainly typhus and diphtheria bacilli from the standpoint of the length of life of the bacteria on different kinds of fabric and disinfectants which will destroy them.

- (1168) PIERCE, W. D., HUTCHISON, R. H., and MOSCOWITZ, A.

1921. MODERN STEAM LAUNDRY PROCESSES AS A MEANS OF DESTROYING VERMIN. Pub. Health Rpts. [U. S.] 36: 710-717. (Reprint 649.)

Report of a study made with special reference to the steam laundries at cantonments in this country to determine whether woollens could be so treated as to completely destroy body lice without injury to the woolen textiles.

- (1169) PRESCOTT, S. C.

1928. THE POWER LAUNDRY AS A DEFENDER OF THE PUBLIC HEALTH. Natl Laundry Jour. 99 (5): 87-88.

Paper given at the convention of the Massachusetts Laundry Owners' Association discussing cleanliness from a bacteriological viewpoint and giving the technic and temperatures necessary in laundry practice to obtain sanitary cleanliness.

- (1170) RIES, J. VON.

1917. ANTISEPTISCHE MILITÄRKLEIDERSTOFFE. [Antiseptic military clothing.] Wiener Klin. Wchnschr. 30: 577.

Discusses briefly the ways in which clothing may infect a wound and use of antiseptics.

- (1171) ROSENAU, M. J.

1927. PREVENTIVE MEDICINE AND HYGIENE. Ed. 5, 1458 p., illus. New York and London, D. Appleton & Co.

The chapters on insect-borne diseases and disinfection include discussions on clothing as they relate to these subjects.

- (1172) ROSITZKY, A.

1899. UEBER EIN EINFACHES, FÜR DEN PRAKTISCHEN ARZT BESTIMMTES VERFAHREN ZUR KLEIDERDESINFECTION MITTELS FORMALDEHYDE. [An easy method for the disinfection of clothing with formaldehyde vapor.] München. Med. Wchnschr. 46: 1372-1375, illus.

Describes an air-tight box used for disinfecting clothing with formaldehyde vapor. The method was so effective that articles wrapped in filter paper and placed in the pockets of garments hung in the disinfection chamber were thoroughly disinfected.

- (1173) ROUSSEAU.

1915. PROJET DE FORMATION SANITAIRE AUTOMOBILE POUR LA DÉSINFECTION RAPIDE DES VÊTEMENTS DES SOLDATS. [Project of the construction of a sanitary automobile for the rapid disinfection of soldiers' clothing.] Paris Médicale 17-18: 519.

Favors automobile equipment for shower baths and disinfection of clothing and quarters for soldiers on the march.

- (1174) RUEPP, T.

1897. UEBER DEN DESINFECTIONS WERTH DES IN CHEMISCHEN KLEIDERREINIGUNGSANSTALTEN VERWENDETEN BENZINS. [Concerning benzine as a disinfectant in commercial dry cleaning.] Correspond.—Bl. Schweiz. Ärzte 27: 587-591.

Report of numerous experiments in which cloths dipped in pus and then washed in gasoline gave results which indicate that gasoline is not an effective disinfectant in dry cleaning. The danger of spreading infection in this way should be realized. However, the heat used in the pressing operation is sufficient to kill the bacteria.

- (1175) SCHROEDER, M. C., and SOUTHERLAND, S. G.
1917. LAUNDRIES AND THE PUBLIC HEALTH. A SANITARY STUDY INCLUDING BACTERIOLOGIC TESTS. Pub. Health Rpts. [U. S.] 32: 225-246. (Reprint 385.)
Report of a study to ascertain the methods employed in New York City in laundering clothes, with special regard to the efficacy of such methods in destroying pathogenic bacteria and thus preventing the spread of disease.
- (1176) SEITZ, E.
1893. UNTERSUCHUNGEN ÜBER ZAHL, LEBENSFÄHIGKEIT UND VIRULENZ DER IN KLEIDUNGSTÜCKEN VORKOMMENDEN BACTERIEN. [An investigation into the number, vitality, and virulence of bacteria appearing in articles of clothing.] 25 p. München. (Inaug. Diss.)
Cites diseases caused by infected clothing. Experiments were carried out to determine whether wool, cotton, silk, or linen offered the best conditions for bacterial growth. A study was also made of the length of time the different bacteria could live in clothing.
- (1177) SIMONDS, J. P.
1917. RECHERCHES SUR LA PRÉSENCE DE SPORES DE BACTÉRIES ANAÉROBES DANS LES UNIFORMES MILITAIRES (ARMÉE BELGE). [Research on the presence of spores of anaerobic bacteria in military uniforms (Belgian Army.)] Presse Méd. [Paris] 25: 100-101.
Observations were made on the bacterial content of uniforms worn by soldiers staying at La Panne and by those returning from the front. New uniforms and new uniform material were also examined. The large numbers of bacteria found in the worn clothing showed the need of proper sterilization.
- (1178) SOBERNHAIN and DITTHORN, F.
1912. ÜBER KLEIDERDESINFEKTION IN EINEM ZERLEGBAREN FORMALDEHYDSCHRANK. [Disinfection of clothing in a portable formaldehyde tank.] Gsndhts-Ingen. 35: 557-561, illus.
Description of a portable device found convenient for disinfecting clothing in a small village where sterilizing equipment was lacking.
- (1179) SVEHLA, K.
1909. ÜBER DIE DESINFEKTIONSWIRKUNG DES BÜGELNS IN DER PROPHYLAXIS VON INFEKTIONSKRANKHEITEN. [Concerning the disinfecting action of ironing in the prophylaxis of infectious diseases.] Arch. Hyg. 70: [373]-379.
Gives data on the disinfecting power of pressing with a hot iron with reference to its use in disinfecting the clothing of physicians and attendants in cases of contagious diseases. Concludes pressing is a simple and good method of sterilizing clothing.
- (1180) WAGNER, A.
1913. DIE DAMPFWÄSCHEREI UND IHRE HYGIENISCHE BEDEUTUNG. [Steam laundries and their hygienic significance.] Gsndhts-Ingen. 36: 135.
The author objects to the establishment of public steam laundries on the grounds of private competition and for hygienic reasons.
- (1181) WEILL, E.
1921. PROPHYLAXIE ET TRAITEMENT DES INFECTIONS CUTANÉES CHEZ LE NOURRISSON PAR L'EMPLOI SYSTÉMATIQUE DES LINGES STÉRILISÉS. [Prophylaxis and treatment of skin infections of the infant by the systematic use of sterilized clothing.] Médecine [Paris] 3: [131]-132, 135. (Abstract in Jour. Amer. Med. Assoc. 78: 391. 1922.)
Advocates the sterilization of infant's clothing and points out cases in which sterilized linens prevent, and even help cure, skin infections. Gives statistical results of the use of sterilized clothes.

(1182) WILLIAMS, L.

1908. TUBERCLE AND UNDERWEAR. Clin. Jour. 33: 190-192.

Considers wool the fabric most favorable to the development of the tubercle bacillus. The behavior of different fabrics in retaining heat, absorbing moisture, and permitting ventilation is discussed. Linen, cotton, and silk undergarments are advocated.

(1183) WILMAERS.

1911. DÉGRAISSAGE ET DÉSINFECTION DES VÊTEMENTS EN DRAP USAGES. [Cleaning and disinfection of soiled cloth garments.] Arch. Méd. Belges (4) 37: 242-246.

Importance of clean clothing is emphasized, from both an economic and a hygienic standpoint. Gives method of cleaning soldiers' clothing which removes all kinds of foreign matter and restores the new appearance.

(1184) WINEGAR, G. P.

1928. BACTERIAL CONTENT OF UNDERSHIRTS. Jour. Home Econ. 20: 349-354.

Experimental work was carried out to determine the kind and quantities of microorganisms taken up by undergarments worn under known conditions. A study was also made of the number of microorganisms surviving washing and drying by different methods and for different numbers of washings. The undershirts studied were those worn by 40 young men in the athletic department of Kansas State Agricultural College.

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